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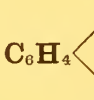
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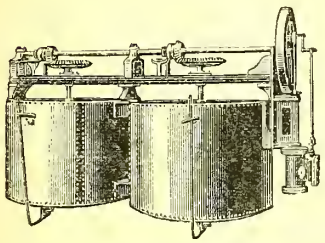
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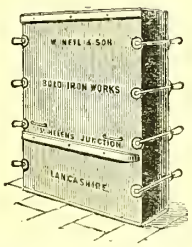
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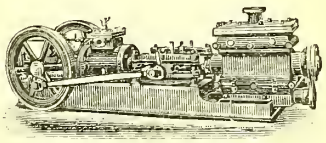
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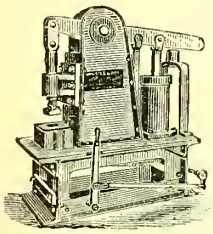
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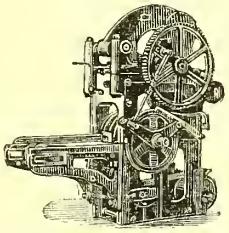
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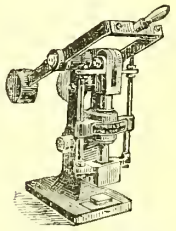
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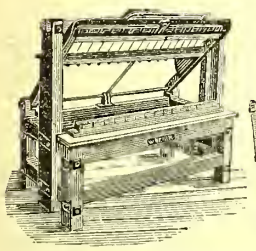
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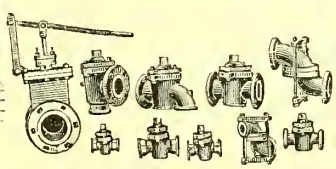
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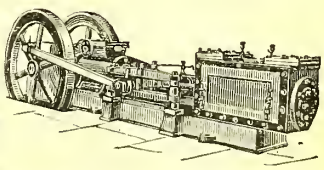
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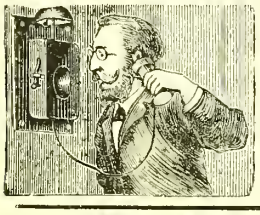
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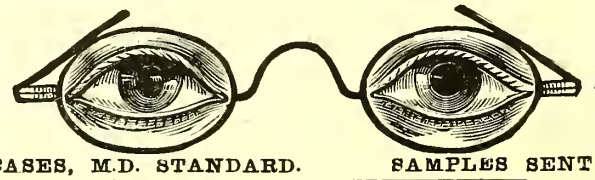
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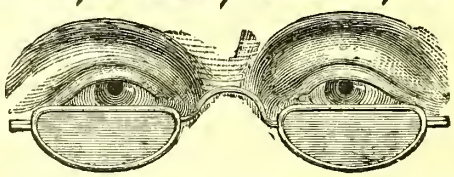
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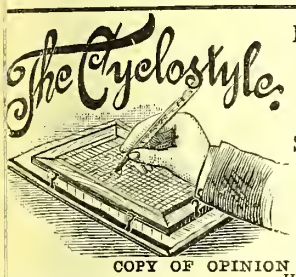
Managing Directors: Dr. MUTER, M.A., F.R.S. Ed., F.I.C., F.C.S., &c., and W. BAXTER.

ESTABLISHED 1st OCTOBER, 1868.

THE TWENTIETH SESSION, 1887-8.

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Simple, Rapid, Cleanly, Durable, and extremely Cheap in Working.

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Gentlemen,—I have had a fair amount of experience in the use of various printing machines, and prefer the Cyclostyle to any other that I have used. *The pencil is easily written, and the printing is especially cleanly and easy to work.*

I am, yours faithfully, ALEXANDER GROVES, Grocer, &c.

Prices of Apparatus complete. Note size, 21/; Letter size, 27/6; Foolscap, 31/6

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TYPE WRITER

Is the latest and by far the simplest Type Writer yet introduced.

It is absolutely simple and requires no learning.

After a little practice a speed of 40 words per minute can be obtained.

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GOOD QUALITY, 7½ × 5 ... ... 10,000, 15/ | SECOND QUALITY, 7½ × 5 ... ... 10,000, 12/6

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Medical Label & General Printer,

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Liverpool Chemists' Price List,

Post Free 1s. 1d.

Manchester Retail Price List,

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EXCHANGE COLUMN.

This section of "The Chemist and Druggist" must be closed for press by Thursday noon of each wee. Remittances payable to EDWARD HALSE.

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Drugs and Chemicals

8 oz. carmine; any reasonable offer. 194.14.

1 oz. cocain hydrochlor., 25s., 3s. 6d. per drachm; 4 lbs. bismuth. subnit., 7s. per lb. Bowen, Chemist, Thornlie Road, South Lambeth, London, S.W.

2 oz. saffron valencia, 6s.; 7 lbs. potassii bromid. ang., 1s. 6d. lb.; 2 lbs. calomel, 2s. 6d. lb.; 4 oz. ol. amygd. essen., 4s; 2 lbs. ess. bergamot, 5s. lb.; 3 lbs. ess. limonis super., 5s. lb. J. C. Lingdale, Skelton, Cleveland.

Formulæ.

Insect powder, equals Dalmatian, costs 7 lbs. 2s.: cyclostyle ink, costs 3d. per 2s 6 l. bottle, 2s. J. C. Lingdale, Cleveland.

A new and successful specific for piles; make splendid proprietary; recipe 1s. S., 51 High Street, East Grinstead.

Reliable recipes, 6d. each; full set of 130, neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Set of 20 practical recipes, with directions, for gonorrhœa, gleet, syphilis, secondaries 3s. 6d.; disinfectant perfume, very cheap to make, either for handkerchief or spirit-lamp diffuser, 2s. 6d.; cough balsam, cheap and effectual, 2s. 6 l. A. Johnson, 64 Furness Hill, Sheffield.

Soluble essences (non-alcoholic, for mineral waters); lime-juice cordial; chlorodyne (perfectly transparent); cascara sagrada cordial; concentrated waters (1 to 40); essence reunet (permanent, no salt); hop bitters; liquor carbonis (resembles Wright's); chemical liquors for syrups (stable); lac rosarum (inseparable, made in few minutes); ink (resembles "Diebroic"); elixir phosphori, invigorating tonic; sponges bleached (golden yellow); liquid dentifrice (like "Floriline"); marking-ink, *sine* silver, writing executed defies chemicals; saline (Eno's or Lamplough's); magic neuralgic drops; lime-juice and glycerine (white as milk, inseparable); pill-coating, pearly white, no mastic or mucilage; crimson marking-ink; hair-restorer, colourless, no deposit, *sine* silver; oleum flavum concentratum, stable colour for pomades; soluble ginger (like Hay's); liquor copaibæ comp. c. buchu et matico (like Richardson's); liquor sautal. flav. (resembles Hewlett's); taraxacum podophyllin, iron quinine (both resemble Pepper's); many perfumes, also toilet requisites; state wants; lists issued; all inexpensive to prepare; 5s. each (5 for 1l.); analyses undertaken. Readers are warned against cheap substitutes. I was first to advertise formulæ in this journal. "Analyst," Mr. Warnes, 6 Rochester Square, N.W. (Only prepaid inquiries answered.)

Literature.

Eighty-five monthly *Chemist and Druggists*, and 261 *Pharmaceutical Journals*, 10s. the lot. Halstead, Rowtenstall.

420 back numbers of the *Pharmaceutical Journal*, dating from 1873 to 1887; also 140 of *Chemist and Druggist*, dating from 1373 to 1886; what offers? Ellwood, Chemist, Leominster.

Proprietary Articles.

12 quart Carlsbad water; 3, 2s. green Condy's fluid; what offers? Griffith, High Street, Weston-Super-Mare.

10 cwt. Myer's cattle spice; 30 2-lb. packets poultry spice; good condition; any reasonable offer. 191/3.

10

Educational.

Wills's "Materia Medica Cabinet," post free, 3s. 9d. W. Roberts, Southdown House, Eastbourne.

Oliver's "Botany," 2s.; Bentley and Redwood's "Materia Medica," 1874, 15s; British Pharmacopœia, 1867, 3s.; Bentham's "British Flora," 6s. 6d.; Attfield's "Chemistry," 1875, 7s. 6d.; Bentley's "Manual of Botany," 8s.; all clean as new. Swindells, 61 London Road, Manchester.

Set of illegible autograph prescriptions (original) 2s. 6d., as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of successful students at last Minor, 1s. 1d.; new "Pharmacopœia," 5s.; lot of cheap, almost new, books; Attfield's "Chemistry," 1886, 12s.; Squire's "Companion," 1886, 8s. 6d.; carriage paid; stamp for list. Saunders, Medical Tutor, 6 Rochester Square, N.W.

Shop Fittings.

Upright case, mahogany, 6 ft. by 3 feet, in perfect condition, 2l.; soda-water stand, Maw A 59, good condition 2l. 10s.; quart tincture-press, cheap. Furnival & Eardley, Chemists, Hanley.

Wholesale druggists' bottles, 60 dozen 24 oz. P.G.N.M. ordinary plain pints, new, 1s. per dozen; 12 dozen P.G.N.M. ordinary stoppered 90 oz. Winchesters, new, 4s per dozen; any quantity; all perfect; cases free. "Chemicus," L. & C. C. Club, Leeds.

12 ft. wall fixture, drawers, lockers, shelving, cornice, in first-class condition, 8l. 10s.; 18 ft. ditto ditto ditto, 14l. 10s; several others; 6 ft. nests of 30 drawers, gold-labelled and glass knobs, 2s. per drawer; 6 ft, 7 ft., 8 ft, 9 ft., 10 ft, 12 ft. mahogany top counters, as Maw's fig. A61, 6s. per foot run, stained and polished fronts; 13 ft. Spanish mahogany ditto, 9l.; 6 ft, 8 ft., 9 ft, 12 ft. plate-glass fronted counters, as Maw's fig. 63, very cheap. E. Natali, 207 Old Street, E.C.

Plate-glass sponge case, Maw's fig. A41, 65s.; a ditto ditto, as Maw's fig. A43, 95s.; show steps, A37, 50s.; desk and glass case, as fig. A31, 60s.; another with silvered-glass back, 65s.; a 3 ft. ditto ditto, 80s.; several very elaborate dispensing screens, from 5 ft. to 8 ft. long, glass case at each side, silvered plate-glass centre, with marble slab in front, tablets on top of cases, "dispensing" "department," shelves at back for dispensing bottles (sketch on application), from 6l. 10s.; a 3 ft. dispensing screen, 54s; a 4 ft. ditto, also a 5 ft. and 6 ft. ditto ditto, and a 4 ft. 6 in. ditto ditto, all with tablets on top, as fig. A 55. E. Natali, 207 Old Street, E.C.

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Superior Second-hand Mahogany Fitting—Plate-glass wall case, 8 ft. 9 in. wide, 8 ft. 11 in. high; 1, 9 ft. wide, 9 ft. high, sheet glass; 1, 6 ft. 9 in. by 4 ft. 3 in. high, elliptical on plan, plate case; a dispensing screen, counter behind; Spanish mahogany counter, 6 ft. 8½ in.; bent-plate counter case, 30 in. O G., with glass shelf; 1, 52½ in. long flaps, with shelves behind; 1, 3 in. ebonized; dispensing screen, 5 ft. 4 in., silvered-plate panel; various specie jars, carboys, rounds, ointment pots, black-rights; remittances with orders. Hyde & Son, Wild Court, Great Wild Street, London.

Wall cases, 4 ft. long, mahogany and plate-glass, as Maw's fig 88, 7l. 10s; 2 ft. 6 in. ditto as A 86, 4l. 10s.; a 6 ft 6 in. wall case, 4 ft. high, 4l. 10s.; a 4 ft. by 4 ft. ditto, 6 in. deep; one 3 ft. 6 in. long, 6 ft. 3 in. high, 75s; upright plate-glass case, 2 ft. 3 in. long, 6 in. high, 45s.; two mahogany and plate-glass air-tight wall-cases, 4 ft. 8 in. high, 9 ft. 6 in. long, 19 ft. long the two, each 7l. Counter cases.—2 ft. 6 in. bent plate-glass as A 16, 45s.; 3 ft. ditto, 50s.; 3 ft. 6 in. ditto, 55s.; 3 ft. 9 in. ditto, 55s.; 5 ft. 6 in. ditto ditto, 5l.; 3 ft. 2 in. ditto, ditto, 55s.; bent plate-glass case, 9 in. wide, 3l.; 8 ft. ebonized plate-glass ditto, 2 ft wide; bent plate-glass tooth-brush cases, 2 ft. long, 45s.; 3 ft. plate-glass case, as A 4, 5l.; cigar cases with bent case top, 45s.; 6 ft. fig. 18, 5l. 5s. E. Natali, 207 Old Street, London, E.C.

Miscellaneous.

A few barrels turpentine, f.o.r. Fleetwood cart. Furnival & Eardley, Chemists, Hanley.

Two 18-in. specie jars glass covers, scroll label, quite new; price 2l. Smith, 227 Commercial Road, London.

Microscopic slides, best quality only, from 2d. dozen; lists and testimonials. T. G. Maida Vale, W.

Owen's dental chair, footstool, and pedal spittoon. price of lot 7l. Dens, 294 Oxford Street, Manchester.

A good and neat pony and cart, suitable for pleasure or business; also fox-terrier puppy. Doubleday, Dorking.

Exchange 1 gross clean 3d. size vermin-killer for either 1 lb. potass. iodid., 1 lb. opium, 2 oz. morphia, or 4 oz. quinine. Baker, Boaler Street, Liverpool.

100 6 gall. sheet-iron bottles, in good condition; also *The Chemist and Druggist* Journal for last five years sent for any offer. Wurtele, 8 Boulivard. Halifax.

What offers? sale or exchange, splendid walking canary, with two hens, breeding cage, partitions, nests, all complete, worth 5s. Procter, Chemist, Horncastle, Lincolnshire.

Shall be glad to post a copy of my illustrated price-list, crown 4to, 24 pages, to any retail chemist who will post me a copy of his price-list of reduced prices, &c. Francis, Chemist, Wrexham.

WANTED.

4 lbs mercury; state lowest price for cash. Neill, Moffat, N.B.

Beasley's "Receipt Book," latest edition, cheap. McIver, Dingwall.

Attfield's "Chemistry," Bentley's "Botany," lowest prices, latest editions. Shield, 2 Northgate, Gloucester.

Oertling's or Becker's balance, to carry about 50 grammes; also copper water cistern. Reply, Boilean & Boyd, Dublin.

B. P., 1835, or Squire's "Companion"; also set of dental forceps; state prices. D., 131 Dial Lane, Hill Top, West Bromwich.

Copies of *The Chemist and Druggist* for February 25, 1888; 4d. given per copy, sent to The Publisher, THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Gorham's "Tooth Extractor,"; Squire's "Companion"; Tanner's "Index of Diseases"; Hargrave's "Venereal"; Savory's "Compendium"; Huxley's "Physiology"; Heath's "Minor Surgery"; all latest editions; Murrell on "Poisoning." Particulars, Jones, McKintosh Place, Cardiff.

TO AERATED WATER MANUFACTURERS.

HAY'S SOLUBLE ESSENCES

ARE GUARANTEED TO BE THE FINEST IN THE MARKET.

HONOURABLE MENTION: INTERNATIONAL FOOD EXHIBITION, AGRICULTURAL HALL, LONDON, OCTOBER, 1880. GOLD MEDAL: SOCIETY OF ARTS, PARIS, 1883.

HAY'S HOP ALE ESSENCE.

"Supplies an excellent stomachic, appetising, and agreeable summer drink."
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"For this Essence a brilliant future may be anticipated. It possesses characteristics very seldom to be met with."
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"This is an excellent Non-Alcoholic beverage."
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"Evolves a delicious aroma of Hops."—*Medical Press.*

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GINGER CHAMPAGNE.

(Made from Hay's Essence.)

"An excellent and most agreeable beverage."
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"Mr. Hay has caught the fine aroma of ginger with remarkable success. It is equally sparkling but more refreshing than its rival, the Royal French Beverage."
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GINGER ALE.

(Made from Hay's Fortified Essence.)

"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger."
The Chemist and Druggist.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER.

A Pure Essence of the Finest Ginger, perfectly free from Capsicum. Highly adapted for the manufacture of **Transparent Aerated Waters**, and for all Dietetic, Medicinal, and Pharmaceutical purposes. **Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.**

HAY'S COMPOUND FORTIFIED ESSENCE OF JAMAICA GINGER. FOR FIRST QUALITY GINGER ALE.

Specially prepared for the manufacture of the very Finest Ginger Ale made, is an addition of Vanilla, Lemou, and other flavours to the above. It imparts, with the exquisite **Ginger Aroma** of the above-mentioned Essence, a peculiarly fine fruity flavour, combined with the fullest amount of fragrance and pungency. **Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.** Quantity required, five fluid ozs. to each gallon of Syrup, making 106 10-oz. bottles.

HAY'S GINGER ALE EXTRACT. FOR SECOND QUALITY GINGER ALE.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts **Pungency, Colouring, great Brilliancy,** and an unusually **Fine Ginger Flavour and Aroma,** and makes a thoroughly good article. **Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s.** Quantity required, three fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

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HAY'S GINGER CHAMPAGNE ESSENCE.

For the manufacture of Ginger Champagne. This Essence is a combination of the **finest flavours,** and imparts with the Ginger a **most exquisite aroma,** making a most delicious and refreshing approximation to Champagne. **Trade Price, 8s. per lb.; 12 lbs. and upwards, 7s. 6d.** Quantity required, ten fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS.

A magnificent Preparation, perfectly soluble, and makes the finest Lemonade obtainable. **Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s.** "Added in the proportion of one fluid oz. to each gallon of Syrup, the Soluble Essence imparts the most delicious flavour of the Lemon."—*The Chemists' Journal.*

HAY'S LEMON FLAVOUR. (Perfectly Soluble.)

Is prepared from the **Finest Messina Lemons,** and imparts to Lemonade all the **Fine Aroma and Flavour** of the fresh fruit. **An Exceptionally Fine Essence. Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.** Quantity required, one and a half fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S HOP ALE ESSENCE.

This Essence is made from the **Choicest Hops grown,** and is unrivalled for its peculiarly fine **Hop flavour** and aroma. **Hop Ale** made from this Essence has the full flavour of the **finest Hops,** and is a really **appetising Bitter Beer. Trade price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s.** Quantity required, two fluid ozs to each gallon of Syrup, making 106 10-oz. Bottles.

For Orange, Vanilla, and all other Essences send for Price List. [2]

W. HAY, Manufacturing Chemist, Beverley Rd., ENGLAND. HULL.

The difference between preparations made from HAY'S ESSENCES and those made from the numerous SPURIOUS IMITATIONS of them bearing the name of SOLUBLE ESSENCES is most marked, and no manufacturer using the latter can compete with one using HAY'S PREPARATIONS, as is universally known.

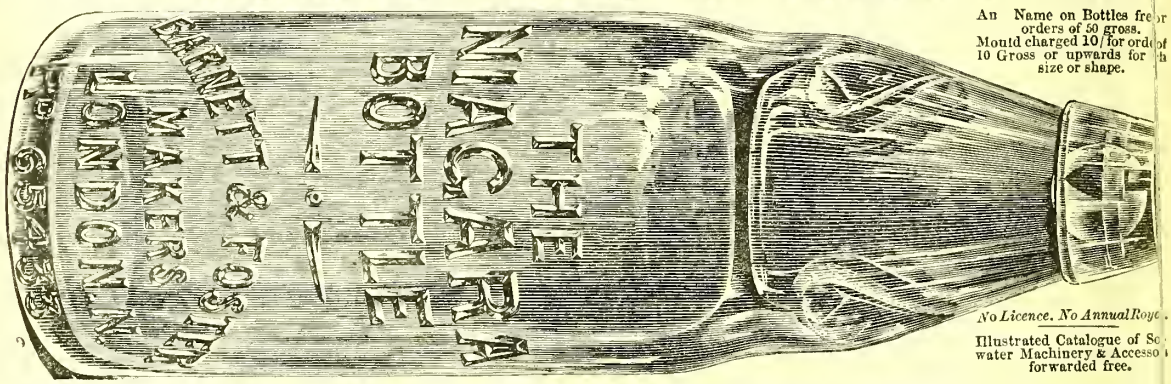
Indentors, to prevent disappointment, should specify that the Goods are to be of HAY'S MANUFACTURE.

"THE BEST NATURAL APERIENT"

Persistent attempts are made by interested parties to deceive the public by offering Natural Mineral Aperient Waters th marks, names, and designations very similar to those which are used by the **APOLLINARIS COMPANY, LIMITED,** or he **NATURAL MINERAL APERIENT WATERS** imported by them.

Under these circumstances the **APOLLINARIS COMPANY, LIMITED,** feel compelled to caution the public at the **HUNGARIAN BITTER WATER** sold by the **COMPANY** always bears the name of the **APOLLINA S COMPANY, LIMITED,** on the Label.

THE "NIAGARA" GLOBE-STOPPERED BOTTLE



An Name on Bottles fre r orders of 50 gross. Mould charged 10/ for orde of 10 Gross or upwards for h size or shape.

No Licence. No Annual Roya .

Illustrated Catalogue of So water Machinery & Accesso forwarded free.

Present Prices, net :—SPLITS, 14/, FULL SIZE, 16/ per Gross, including Rings. 12 and 14 oz., 1/; 16 oz., 2/ ext per Gross. At our Works, LEEDS, YORKSHIRE.

EXTRA RINGS, 1/8, 1/9, and 2/ per Gross. SEND FOR SAMPLE AND COMPARI

ORDERS TO BE SENT TO

BARNETT & FOSTER,

Mineral Water Engineers, Manufacturing Chemists, and General Providers to the Aërated Water, Wine, Beer, and Cider Trades,

"NIAGARA WORKS," 26T EAGLE WHARF ROAD, LONDON, N.

Syphons & Apparatus with all the latest improvements for the Manufacture of Aërated Wate

GUÉRET FRÈRES,

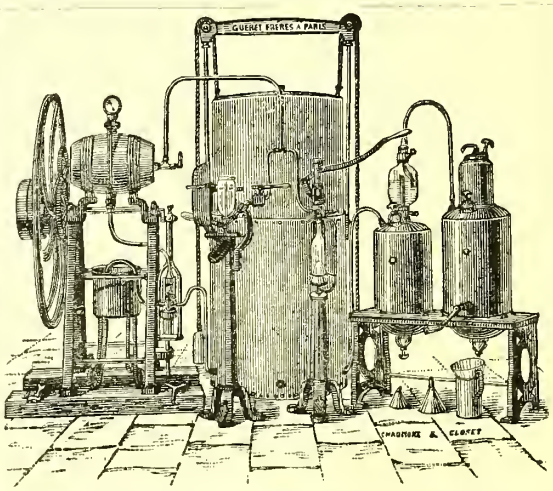
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PARIS—72 BOULEVARD DE LA GARE, 72—PARIS.

GOLD MEDAL, AMSTERDAM, 1883.

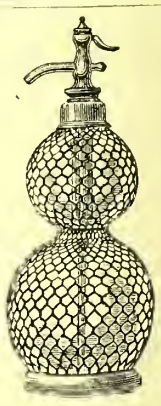


SYPHONS WITH SHORT LEVER, With metal tops of pure tin, carefully mounted, and the glass of the first quality.



"CONTINUOUS PROCESS" Apparatus, complete, with BRONZE SATURATOR (spherical or barrel-shaped). Guaranteed without flaw in construction, possessing perfect action, and tested to a high pressure, while fulfilling every desirable condition of economy and sanitation.

DIPLOMA OF HONOUR PARIS, 1887.



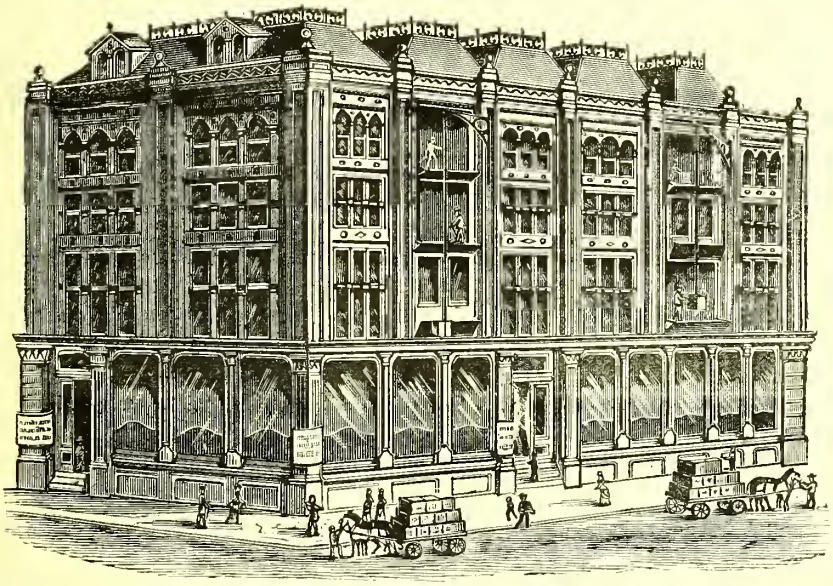
GAZOSELTZ, For the instantaneous production of Aërated Beverages at table. Any one can use them.

FULL PARTICULARS AND GENERAL CATALOGUE SENT ON APPLICATION.

HESELTINE'S

THE PREMIER TEA OF INDIA AND CEYLON, IS THEIR SPECIAL IMPORTATION AND THE PERFECTION OF TEA.

REGISTERED **"TAPRABUNDA"** TRADE MARK.



OFFICES AND DUTY PAID WAREHOUSES.

For Retail at 1s. 8d., 2s., and 2s. 6d.

In Lead Packets, ¼ lb., ½ lb., and 1 lb.

Terms of Agency, and Samples of the Tea, on application.

WM. HESELTINE & SON,

56 Wilson Street, and 1 & 3 Earl Street, Finsbury,

LONDON, E.C.

AGENTS WANTED WHERE NOT ALREADY REPRESENTED.

FURTHER TESTIMONY !!!

We now invite the perusal of three more UNSOLICITED TESTIMONIALS (at foot) received on the 21st and 31st ult. and 3rd inst. SUCH GRATIFYING TESTIMONY NEEDS NO COMMENT.

POSITIVE FACTS.

THE LATEST.

March 21st.—"The Tea is LIKED WELL, getting fresh Customers every day."

March 31st.—"I find fresh Customers every week, and it GIVES GREAT SATISFACTION."

April 3rd.—"We have got your Tea started here, and it GIVES SATISFACTION TO EVERYONE WHO TRIES IT."

No. 4.—*On the 19th February, 1888, a customer writes, ordering Spring Blossom Ceylon Tea: "I sha make it known as much as possible; they all say THEY NEVER TASTED BETTER TEA."*

No. 5.—*Another on the 25th February, 1888, says: 'I find the Spring Blossom rapidly gaining favou and GIVES UNIVERSAL SATISFACTION."*

No. 6.—*Another on the 27th February, 1888, says: "GREAT ENQUIRIES FOR THIS TEA."*

No. 7.—*A Customer, ordering 6 Cases of Spring Blossom Ceylon Tea on the 10th February, 1888, says "I may say that the customers who have tried it speak in great praise of it, and WILL HAVE N OTHER."*

No. 8.—*Another writes on the 7th February, 1888, ordering 3 Cases of Spring Blossom: "The sale o your Spring Blossom Tea is increasing, and appears to give much satisfaction."*

No. 9.—*Another writes on January 9th, 1888, of the Spring Blossom: "I may for your information tel you that your Ceylon Tea GIVES GENERAL SATISFACTION."*

No. 10.—*Another writes, February 13th, 1888: "The Spring Blossom Tea is TAKING WELL with m customers."*

No. 11.—*Another writes, November 21st, 1887: "I may add that the sale of your Tea (The Spring Blossom) is GRADUALLY INCREASING, AND IS MUCH APPROVED OF."*

[Originals of the above Unsolicited Testimonials may be seen at our Office.]

AGENTS WANTED WHERE NOT REPRESENTED

Packed in Circular Air-tight Canisters, to sell Retail at 2/, 2/6, & 3/ per lb. Tasting Samples and Terms post-free, or set of three ¼-lb. Samples post-free for 2/ in stamps.

CAVE, JOHNSON & CO. Wholesale Tea & Coffee Dealers, and Practical Tea Blenders,

8 LIME STREET, E.C., and 1 FENCHURCH AVENUE, E.C.

MITRE TEA.

COMFORT & PROLONG YOUR EXISTENCE

BY DRINKING

MITRE TEA.

TRADE MARK.

	s.	d.
Mitre "Broken Leaf"	1	4
Mitre "Broken Am. Pekoe"	1	8
Mitre "Thrift" (whole leaf)	1	8
Mitre "Kee-Mun" ...	2	0
Mitre "Amgoorie" ...	2	6



MITRE TEA.

TRADE MARK.

	s.	d.
Mitre "Broken Leaf"	1	4
Mitre "Broken Am. Pekoe"	1	8
Mitre "Thrift" (whole leaf)	1	8
Mitre "Kee-Mun" ...	2	0
Mitre "Amgoorie" ...	2	6

Fac-Simile of Show Card distributed Gratis to all Agents.

Sold by Specially Selected Agents. Wrapped in ¼-lb., ½-lb., & 1-lb. Parcels.

VALUABLE AGENCY.

Framed Show Cards, Enamelled Iron Tablets, Posters, Window Transfer, and Handbills with Agent's Name on supplied free. Newspaper and Railway Station Advertisements to suit the requirements of Agents. Applications for Agencies where unrepresented will receive prompt attention. Price Current and Pamphlet, with Terms, post free.

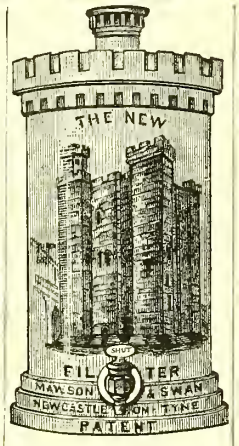
KEARLEY & TONGE, MITRE SQUARE, ALDGATE, **LONDON, E.C.**

THE ONLY FILTERS PROVEN BY ANALYSIS.

BEWARE



Engraved Glass .. 6/6
Do., with handle (with six charges) 7/6



White, decorated 1 2
Earthenware .. 35/- 45/-

OF DRINKING WATER

which has not been thoroughly Filtered as, besides Lead, Lime in excess, and other mineral impurities, most waters contain either sewage, the eggs of intestinal worms, and hydatid disease, or the

Germs of Infectious Diseases,

such as Cholera, Dysentery, Typhoid Fever, &c.

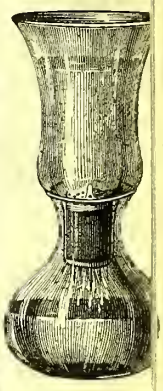
Repeated analyses have proved that

MAWSON'S NEW PATENT FILTER

Removes all these impurities, and that it is the only efficient, practical, and scientifically reliable Filter.



Size— 1 2 3 4 6
Price, 14/6, 21/, 27/, 35/, 50/.



Plain Glass .. ..
Do., with handle (with six charges) 6

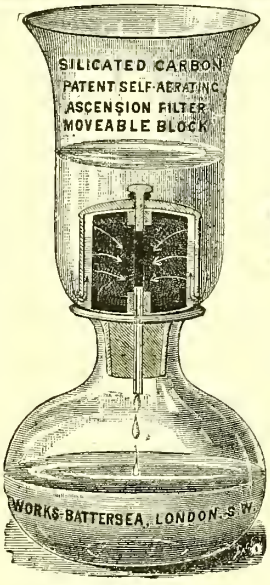
MAWSON, SWAN & WEDDELL

20 West Grainger Street, Newcastle-on-Tyne.

WHOLESALE AGENTS—**London**: Messrs. S. Maw, Son & Thompson; Messrs. Bentley & Sons; Messrs Bourne, Johnson & Latimer; William Toogood; Messrs. Lynch & Co. **Manchester**: Messrs. Woolley, Sons & Co. **Liverpool**: Messrs. J. H. & S. Johnson; Messrs. Sy & Co.; Messrs. Evans, Sons & Co. **Birmingham**: Messrs. Churchill & Sons; Messrs. Salt & Co. **Edinburgh**: Messrs. Duncan, Flockhart & Messrs. Raimes & Co. **Glasgow**: Glasgow Apothecaries' Co. **Belfast**: Messrs. Grattan & Co. **Cork**: Goulding & Co., Lim.

LEAD POISONING

LIBERAL DISCOUNT TO THE TRADE.



Glass Table Filters.

So commonly the result of Drinking Unfiltered Water is rendered

IMPOSSIBLE

BY USING

SILICATED CARBON FILTERS

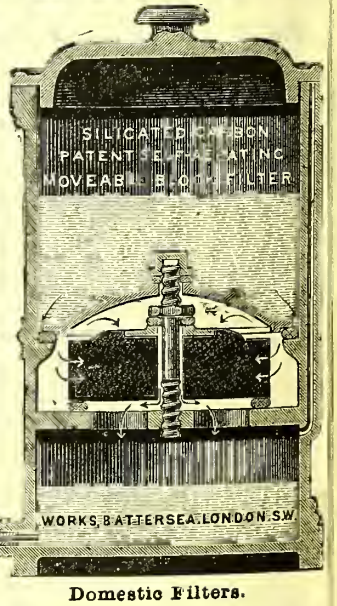
AERATED

Through which no particle of Lead can pass. This fact is attested by the leading analysts of the day.

"The most remarkable property of the Silicated Carbon Filter appears when its filtering power is tested in the removal of Lead from solution . . . I wish to dwell with the utmost emphasis upon the value of these Filters for removing Lead."

H. C. BARTLETT, Ph.D., F.C.S

The Silicated Carbon Block can be Instantly Removed, leaving the whole of the Filter Open for Inspection and Cleansing.



Domestic Filters.

FOR PRICES AND FULL PARTICULARS, WRITE TO THE

SILICATED CARBON FILTER CO., BATTERSEA, LONDON, S.W.

16

☛ WHAT YOU CAN
☛ WHAT YOU SHOULD
SELL
CASSELL'S CEYLON TEAS

THE LANCET, September 25, 1886, says of Cassell's Ceylon Teas:—
"The Tea Plantations of Ceylon have been a great success, and have added in an important degree to the material resources of the Island. The sample now before us is very satisfactory. There is no facing or other mineral matter. The leaves are small and clean, and give a strong decoction of delicate flavour. Such Tea may well replace the product of China."

THE GROCER, January 2, 1886, says:—
"The Ceylon Teas Messrs. Cassell have named and registered as 'The Tea of the Future,' a title which will most probably prove true, if the consumption of this really fine article increases in the same ratio that it has done during the past two or three years."

"FRAGRANT TEA,"
"PURE AS IMPORTED,"
In Air-tight Lead Package, ¼, ½, and 1 pound.
Charged 1/8 sells 2/, 2/ sells 2/6, 2/6 sells 3/.

Agents appointed in City, Town, and Village.
Write for Sample Packages, sent post-free.
Handbills, Showcards, &c., sent with each order.
☛ THIS TEA COMMANDS A SALE.

ADDRESS:—
J. CASSELL & CO., 80 Fenchurch St. LONDON.

DE MIEL'S PERFECT HEALTH BISCUITS.

CHEMICAL LABORATORY.
54 Holborn Viaduct, E.C., London, Jan. 7, 1887.

Messrs. THE INTERNATIONAL PATENTS ASSOCIATION.

Dear Sirs,—Having submitted the sample of DE MIEL'S BISCUITS *lately received from you to a careful chemical analysis, we are enabled to report upon them as follows:—*

These Biscuits have been found to contain considerable proportions of nitrogenous matter and of carbo-hydrates; they are also especially rich in salts, which include a large amount of combined phosphoric acid. The **flesh-producing, heat-giving** *and* **bone-forming** *constituents of food are thus all represented in these Biscuits.*

A satisfactory feature is absence of excess of moisture, the baking having evidently been conducted with care,

The Biscuits possessed an agreeable flavour; and they can be pronounced to be well made and of good quality.—We remain, faithfully yours,

ARTHUR HILL HASSALL, M.D., Lond.,
Author of "Food: Its Adulterations and the Methods for their Detection."
EDWY GODWIN CLAYTON, F.I.C., F.C.S.

A Liberal Discount to the Trade. Circulars and Particulars on application.

The INTERNATIONAL PATENTS ASSOCIATION,
15 NICHOLAS LANE, LONDON, E.C.,
MANUFACTURING CHEMISTS AND SUNDRIESMEN.

TYRER'S SAUCES
GOOD VALUE
AND
"BOROUGH" KETCHUP

THE GIANT 1d. BOTTLE OF SAUCE.
LARGEST IN THE TRADE.
In Half-Gross Boxes, at 6/6 per Gross.*

"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE, OR READING SAUCE.

1d. Sample Bottles, dozen parcels	.. ..	per gross	5/	extra quality 6/
" " ½ gross boxes	.. ..	"	5/3	" 6/6
1d. Giant Bottles, dozen parcels	.. ..	"	6/	" 8/
" " ½ gross boxes	.. ..	"	6/6*	" 8/6
½-Bottles (flat or round), reputed ½-pint	..	"	16/	" 24/
½-Bottles (flat or round), reputed pint	..	"	23/	" 32/
½-pint Imperial Round Stoppered Bottles	..	"	30/	" 36/
1-pint Imperial " "	..	"	50/	" 60/
12½-gallon Casks (casks free).. "	.. ..	each	20/	" 32/

ROYAL CAFÉ SAUCE.
In 8 oz. square-stoppered bottles, 48/ per gross.
A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by
PETER TYRER,
The "Borough" Ketchup and Sauce Maker,
70 LONG LANE, BOROUGH, LONDON, S.E.
SCOTCH AGENCY: 113 WEST NILE STREET, GLASGOW.
Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.
BURGOYNE & CO., 16 Coleman Street, London, E.C.
JOS. TRAVERS & SONS, 119 Cannon Street, London, E.C.

Edwards' Desiccated Soup.
BY ROYAL LETTERS PATENT.
HIGHEST AWARDS:
International Health Exhibition, LONDON, 1884.
International Exhibition, LIVERPOOL, 1886.

Consists of the finest Vegetables and Extract of Beef in a dry state.

The Manufacturers beg to direct the attention of the Trade to the above article, now commanding a ready and remunerative sale. It is put up in a neat and attractive form, in 1-lb., ½-lb., and ¼-lb. tins, to sell at 1s. 3d., 8d., and 4½d.; also in packets containing 1 oz. at 1d. These are packed in cases of 36 1-lb., 48 ½-lb., or 72 ¼-lb. tins; the 1d. packets in gross and half-gross boxes, in cases of 12 gross; carriage, tins, and cases free. A liberal supply of Show Cards, Glaciers, and printed matter, consisting of Circulars, Medical Testimonials, Press Opinions, and Counter Bills bearing name and address.

Sample, with Terms, free on receipt of Business Card.

FREDK. KING & CO., LIM.
26 WARING STREET, BELFAST, and
3 and 6 CAMOMILE ST., E.C.

THE NEW DIETETIC EFFERVESCING
KEF. MILK DRINK. KEF.
The most easily assimilated Food in Wasting Diseases.
PREPARED AND DELIVERED DAILY BY THE
SOLE MANUFACTURERS,
SPRING & CO., 21 Blenheim Road, N.W.
TRADE MARK: HEBE TRADE MARK: HEBE

"RAMORNIE." LIEBIG'S Extract of Meat.
As supplied to the War Office.

1-lb. Jars	per lb. 6/2	per doz. 74/0	2-oz. Jars	per lb. 7/0	per doz. 10/6
½-lb. Jars	" 6/4	" 38/0	1-oz. Jars	" 7/8	" 5/9
4-oz. Jars	" 6/7	" 19/9	½-oz. Jars	" 8/0	" 3/0

Write for Detailed Price List to the Australian Meat Co., 9 and 11 Fenchurch Avenue, E.C. *6 lbs. Carriage Free.*

MAY, ROBERTS & CO.

9 CLERKENWELL ROAD, LONDON, E.C.

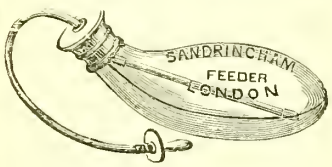
TELEGRAPHIC ADDRESS—"FEEDING BOTTLES LONDON."

CARRIAGE ON SUNDRIES.—We allow 5 per cent. discount on orders for £2 worth of "Sundries" in lieu of Carriage. By this arrangement our Friends are enabled to have enclosures sent with our goods, which they were unable to when we paid Carriage.

NO TRAVELLERS EMPLOYED — BUYERS ARE THEREFORE SPARED THEIR EXPENSE.

COMPARE OUR PRICES.

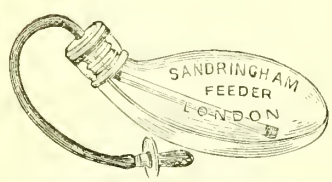
REDUCED PRICES FOR FEEDING BOTTLES.



"Sandringham." Earthenware Tops.

Sandringham (1s.) — WHITE,
Earthenware Tops—

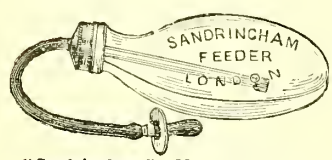
	s.	d.
With White Fittings, each in box, two brushes ..per doz.	5	6
With Black Fittings, each in box, two brushes ..per doz.	6	0
Spare White Fittings ,,	2	9
Spare Black Fittings ,,	3	3
Spare Bottles ..... ,,	1	4



"Sandringham." Screw Glass Stoppers.

Sandringham (1s.) — WHITE,
Screw Glass Stoppers—

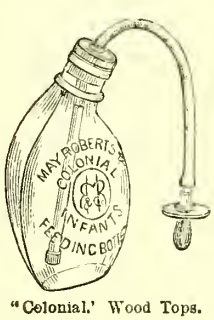
	s.	d.
With White Fittings, each in box, two brushes ..per doz.	5	6
With Black Fittings, each in box, two brushes ..per doz.	6	0
Spare White Fittings ,,	2	9
Spare Black Fittings ,,	3	3
Spare Bottles ..... ,,	2	0



"Sandringham." Metal Screw Caps.

Sandringham (1s.) — WHITE,
Screw Metal Caps, Nickel plated—

	s.	d.
With White Fittings, each in box, two brushes ..per doz.	6	0
With Black Fittings, each in box, two brushes . per doz.	6	6
Spare White Fittings ,,	3	6
Spare Black Fittings ,,	4	0
Spare Bottles ..... ,,	1	6



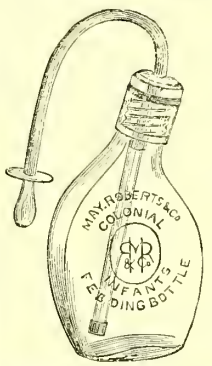
"Colonial.' Wood Tops.

Colonial (6d.) — GREEN,
Boxwood Tops—

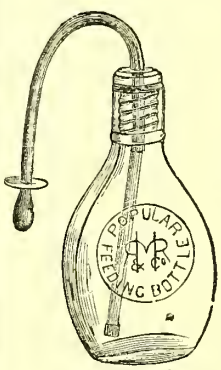
	s.	d.
With White Fittings, 1 dozen in box ....per doz.	2	4
With Black Fittings, 1 dozen in box ....per doz.	2	7
With White Fittings, each in box .....per doz.	2	10
With Black Fittings, each in box .....per doz.	3	1
If with White instead of Green Bottles .....per doz. 2d. extra.		
Spare White Fittings per doz.	1	4
Spare Black Fittings ,,	1	7
Spare Green Bottles ,,	0	11
Spare White Bottles ,,	1	0

Colonial (6d.) — GREEN,
Screw Glass Stoppers—

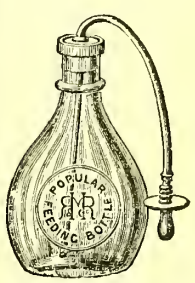
	s.	d.
With White Fittings, 1 dozen in box ....per doz.	3	0
With Black Fittings, 1 dozen in box ....per doz.	3	3
With White Fittings, each in box .....per doz.	3	6
With Black Fittings, each in box .....per doz.	3	9
Spare White Fittings ,,	1	6
Spare Black Fittings ,,	1	9
Spare Bottles ..... ,,	1	9



"Colonial." Screw Glass Stopper.



"Popular." Screw Glass Stoppers.



"Popular." Wood Tops.

Colonial (1s.)—WHITE,
Earthenware Tops—

	s.
With White Fittings, each in box, two brushes..per doz.	4
With Black Fittings, each in box, two brushes..per doz.	5
Spare White Fittings ,,	2
Spare Black Fittings ,,	2
Spare Bottles ..... ,,	1

Colonial (1s.) — WHITE,
Screw Glass Stoppers—

	s.
With White Fittings, each in box, two brushes..per doz.	4
With Black Fittings, each in box, two brushes..per doz.	5
Spare White Fittings ,,	2
Spare Black Fittings ,,	2
Spare Bottles ..... ,,	1

Popular (6d.)—GREEN,
Boxwood Tops—

	s.
With White Fittings, 1 dozen in box ....per doz.	2
With Black Fittings, 1 dozen in box ....per doz.	2
With White Fittings, each in box .....per doz.	2
With Black Fittings, each in box .....per doz.	3
If with White instead of Green Bottles .....per doz. 2d. extra.	
Spare White Fittings per doz.	1
Spare Black Fittings ,,	1
Spare Green Bottles ,,	0
Spare White Bottles ,,	1

Popular (6d.)—GREEN,
Screw Glass Stoppers—

	s.
With White Fittings, 1 dozen in box ....per doz.	3
With Black Fittings, 1 dozen in box ....per doz.	3
With White Fittings, each in box .....per doz.	3
With Black Fittings, each in box .....per doz.	3
Spare White Fittings ,,	1
Spare Black Fittings ,,	1
Spare Bottles ..... ,,	1

Popular (1s.)—WHITE,
Earthenware Tops—

	s.
With White Fittings, each in box, two brushes..per doz.	4
With Black Fittings, each in box, two brushes..per doz.	5
Spare White Fittings ,,	2
Spare Black Fittings ,,	2
Spare Bottles ..... ,,	1

Popular (1s.) — WHITE,
Screw Glass Stoppers—

	s.
With White Fittings, each in box, two brushes..per doz.	4
With Black Fittings, each in box, two brushes..per doz.	5
Spare White Fittings ,,	2
Spare Black Fittings ,,	2
Spare Bottles ..... ,,	1

SPECIAL DISCOUNT FOR FIVE AND TEN GROSS LOTS

Telephone Number, 1852. Telegraphic Address—CHEMICUS LONDON.

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[See GINGER ALE.]

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[See SYPHONS and ESSENCES.]
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POLISHING
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Bradley, Bonrdas (Albatum)
Clark, W.
Oakey, John, and Sons

PRINTING
Birmingham Machinists' Co.
Bowers Bros.
Facsimile Apparatus Co.
Ford, Shaplana and Co.
Silverlock, H.
Townsend, J. (Exeter)

PUMILINE
Burroughs, Wellcome and Co.
Stern, G. and G.

QUININE SALTS
Howards and Sons
Oscar Andreae and Co.
Zimmermann

RENNET
Benger's (Essence of)
Johnsen and Jörgensen

SACCHARIN
Allen and Hanburys
Burroughs, Wellcome and Co.

SALICINE
Macfarlan and Co.
Smith, T. and H., and Co.

SALOL
Kuhn, B.

SAUCES, PICKLES
Goodall, Backhouse and Co.
Lazenby (Harvey's)
Tyrer, P.

SEA SALT
The Maldon Crystal Salt Co.
Warren, A and J. (Stoddart's Sea Salt)

SCHOOLS OF PHARMACY, HOSPITALS, &c.
Edinburgh Classes
Liverpool School
London Homœopathic and Medical School
Manchester College
South London School of Pharmacy, Lim.
The School of Pharmacy
Tully, J.
Westminster College

SEALING WAX
Fisher, Clark and Co.
Stewart, G., and Co.

SELTZOGENES
Idris and Co.
May, Roberts and Co.

SHAVING
Dukas and Co. (Brushes)
Hovenden (Euxesis)
Lloyd, A. S. (Enzesis

SOAP (SOFT, &c.)
Brecknell, Turner and Sons
British Hygienic Co.
Chiswick Soap Co.
De Pass and Co.
Maw, S., Son and Thompson
Pears' Soap
Stern, G. and G. (Pumiline Toilet and Sanitary)
Whitaker and Grossmith

SHEEP DIP
Grindley and Co.
Tomlinson and Hayward

SHOP FITTERS
Bowling and Govier
Bygrave, J. and W.
Corsan, J. R.
Howlett, S.
Natall, E. (Show Cases)
Yates, W. S.

SMELLING SALTS
Shirley, A. W.

SPECTACLES
Botwright and Grey
Darton, F., and Co.
Raphael and Co

SPIRIT
Boord and Son
Burrough (Pure & Methyl.)
Harvey, J. W., and Co.
Jones and Mason (Methyl.)
Macnair, J. & D.
Phillips and Co
Smith, Stephen and Co.

SPONGE
Cresswell Bros.
Cresswell, R., and Co (Lim.)
Evans, Sons and Co
Hutchinson, A., and Co. (Bags)
Maw, Son & Thompson (Bags)
Peterson, M.
Sherlock Bros. (Sponge Bags)

STAMPS (RUBBER)
Pollard, A. W.
Richford, E. M.

STOPPERS
Austin and Co. (Sprinklers)
Barnett & Foster (The Eclipse)
Brooks, Peel (Sprinklers)

SURGICAL
Ayrton and Saunders
Bailey, W. H., and Son
De Pass and Co.
Haywood, J. H.
Hutchinson, A., and Co.
Ingram and Son
Liverpool Patent Lint Co.
Maw, Son and Thompson
Newsome, C.
Robinson and Sons
Thompson, Millard and Co.
Woolley, Sons and Co.
Wood, Vincent

STARCH
Critchley (Gloss)

STOVES
Clarke, S., & Co. (Gas Heating)

STROPHANTHUS
Burroughs, Wellcome and Co.

SUGAR
Gibson, R., and Sons

SYPHONS
Barnett and Foster
Idris and Co.
Kilner Bros.

SYRINGES
De Pass and Co.
Sumner, R. and Co.

SYRUPS
Fletcher, Fletcher (Liquors)
Idris and Co.
Swann, H. H.

TARTARIC ACID
Middleton, Kirkpatrick and Barr

TEA
Cassell, J., & Co.
Cave, Johnson and Co.
Gt. Tower St. Tea Co.
Heseldine, Wm., and Son
Kearley and Tonge
Walker and Dalrymple

TELEPHONES
Friedlaender, A.

TEREBENE
Hearon, Squire and Co.

THERMOMETERS
Darton, F., and Co.
Maw, Son and Thomnson
Perken, Son and Rayment
Raphael and Co.

TIN CANISTERS
Noakes, B., and Co.

TOILET FIXIURES
Downing, J. S.

TOOTH PASTE
Jewsbury and Brown
Maw, Son and Thompson
Sutton, O., and Co. (Black)
Woods, M. (Areca)

TRADE MARKS
Horn and Son

TRUSSES
Bailey, W. H., and Son
Evans, Sons and Co.
Haywood, J. H.
Lynch and Co.
Maw, Son and Thompson

TYPE-WRITING
Facsimile Apparatus Co.
Pollard, A. W.
The Universal "Simplex" Type-Writer

URETHANE
Howards, Sons and Co.

VACCINE LYMPH
Association for the Supply of the Pure

VALUERS AND TRNSFR. AGNTS
Baker, P. C.
Orridge and Co
Tomlinson and Sons

VARNISH
Clark, W.
Colthurst and Harding
Pronk, Davis and Co.

VERMIN KILLERS
Battle, J. R.
Sanford and Son
Steiner and Co.

VETERINARY
Clark, W.
Corner, R. (Devonshire Oils)
Day and Sons
Day, Son and Hewitt
Gregory, W.
James, R. J. (Blister)
Spratts (Dogs)
Tomlinson and Hayward

VINEGAR
Rothermel (Making)

WAFERS
Crouch, F. B. (Damiana)
Locock, Dr. (Pulmonic)

WHLESLE & EXPT DRUGGISTS
Allen and Hanburys
Barron, Squire and Co.
Burgess, Willows
Burgoyne, Burbidges
Bush, W., Son and Co.
Evans, Lescher and Webb
Evans, Sons and Co.
Evans, Sons and Mason (Lim.)
Ferris and Co.
Harker, Stagg and Morgan
Hearon, Squire and Francis
Hewlett and So
Lorimer and Co.
Hill, A. S., and Son
Oldfield, Pattison and Co.
Potter & Clarke American, &c.)
Southall Bros. and Barclay
Sumner, R., and Co.
Symes and Co.
Thompson, Millard and Co.
Thompson, H. A., and Son
Woolley, Jas., Sons and Co.
Wright, Layman and Umney
Wyleys and Co.

WINDOW TABLTS
Corsan, J. R. (Engraved)

WINES AND SPTS
Boord and Son
Coleman and Co.
Durrant, G. (Orange)
Goodall, Backhouse and Co.
Idris & Co. [(Quinne Wne)
Ingram and Royle
Liebig's Wine Co.
Phillips, G., and Co. (Pure Spirits of Wine)
Smith, Stephen, & Co. (S.V.R.)
Robinson, B. (Orange)

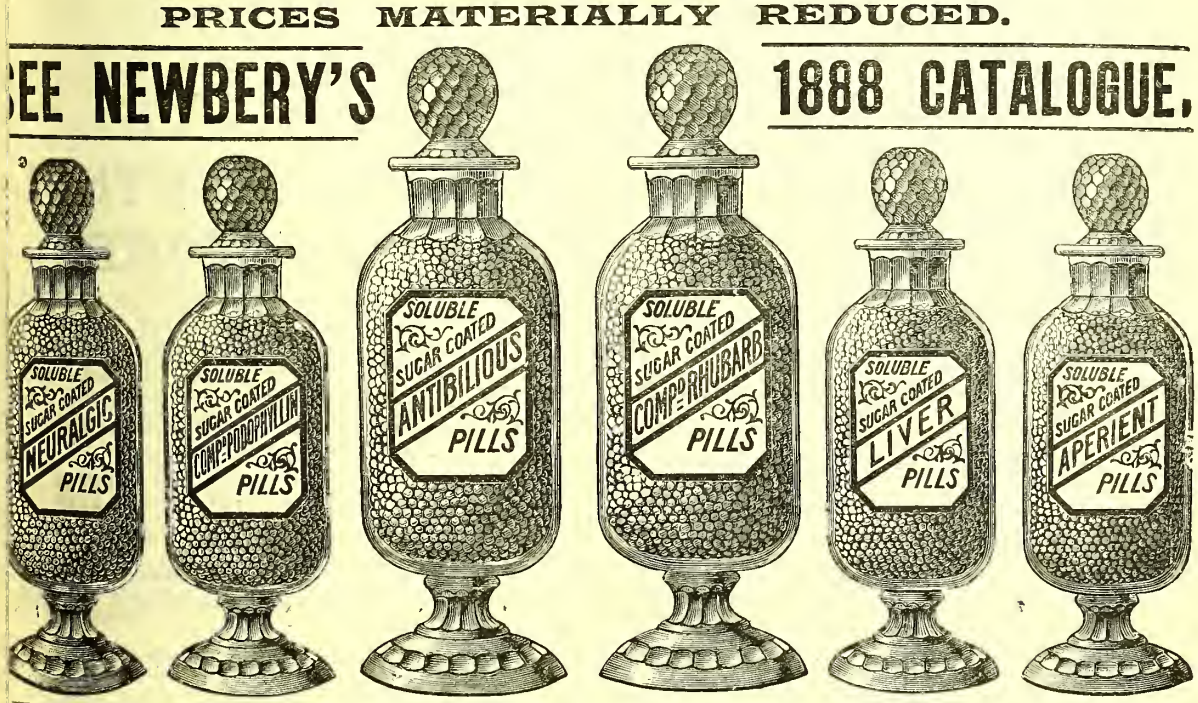
WOOD WOOL
Sanitary Wood Wool Co.

NEWBERY'S OVAL PEDESTAL PILL VASES

REGISTERED PATTERNS.

PRICES MATERIALLY REDUCED.

SEE NEWBERY'S 1888 CATALOGUE.



Label Design Registered under Trade Marks Act. *Vases supplied with Pills only.*

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S
HOUSEHOLD SPECIALITIES.

Yorkshire Relish

THE MOST DELICIOUS SAUCE IN THE WORLD.

To Chops and Steaks, Fish, &c., it is incomparable. In Bottles, 6*d.*, 1*s.* and 2*s.* each.

CAUTION.—*On each Yorkshire Relish Label* is a Willow Pattern Plate and name, Goodall, Backhouse & Co. No other is genuine.

Goodall's Baking Powder

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1*d.* Packets; 6*d.*, 1*s.*, 2*s.*, and 5*s.* Tins.

Goodall's Quinine Wine

The best, cheapest, and most agreeable tonic yet introduced. In Bottles. 6*d.*, 1*s.*, and 2*s.* each.

Goodall's Custard Powder

For making delicious Custards without Eggs, in less time and at half the price. Sold in Boxes, 2*d.*, 6*d.*, and 1*s.* each.

Goodall's Blanc Mange Powder

Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delicious Blancmange may be produced in a few minutes at a trifling cost, and may be had of various flavours, *i.e.*, Raspberry, Strawberry, Lemon, Almond, and Vanilla. Sold in Packets, 6*d.* and 1*s.* each.

Goodall's Egg Powder

Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and nutritious. One sixpenny tin will go as far as twenty-five eggs. In 1*d.* Packets; 6*d.*, 1*s.*, 2*s.* Tins.

SOLE MANUFACTURERS—

GOODALL, BACKHOUSE & CO.,

WHITE HORSE STREET, LEEDS.

A Monthly Price List of Druggists' Sundries, Patent Medicines, &c., can be had Post Free on application.

22

Chemists will do well to lay in a Stock of

SEVEN SEALS

As the same is now being Extensively Advertised.

THE WORLDS GREATEST PAIN CURE

SEVEN SEALS.

SEVEN SEALS.

SEVEN SEALS.

SEVEN SEALS.

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SEVEN SEALS.

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SEVEN SEALS.

SEVEN SEALS.

SEVEN SEALS.

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SEVEN SEALS.

SEVEN SEALS.

SEVEN SEALS.

SEVEN SEALS.

SEVEN SEALS.

The Greatest Pain Cure Extant.

Will destroy instantly every form of EXTERNAL and INTERNAL Aches and Pains. Will cure absolutely and immediately RHEUMATIC PAINS OF EVERY KIND, GOUT TORTURES, LUMBAGO, SCIATICA, ECZEMA, TOOTHACHE, BUNIONS, BRUISES, BURNS, SCALDS, SPRAINS, WOUNDS, NEURALGIA IN FACE AND HEAD, STIFF JOINTS, DIARRHŒA, COLIC and CRAMPS, and ALL EXCRUCIATING PAINS, whether EXTERNAL OR INTERNAL.

Perfectly harmless and pleasant to the taste. May be taken with comfort by Women and Infants as readily as by Men.

Twenty years' successful record in America, and Millions of Bottles sold. Thousands of Testimonials of wonderful cures effected by Seven Seals.

Price 2*s.* 9*d.* and 4*s.* 6*d.*, of all respectable Chemists and Patent Medicine Dealers.

PROPRIETORS:

THE KENNEDY CO., LTD.,

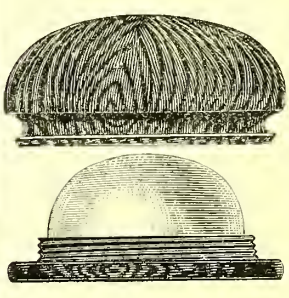
112 Southampton Row, London, W.C.

HAWLEY'S
CASCARA SAGRADA
CAPSULES.

The nauseous taste of this drug is effectually covered by enclosing a Concentrated Fluid Extract in Gelatine.

The boxes contain 24 Capsules in each, are neatly got up, and of a convenient size and shape for the pocket.

Price—1/ retail, 7/ dozen; 6 dozen, 6/6 dozen.



MENTHOL
DOMES.

Pure Menthol, no admixture. In dome-shape cases, as accompanying figure, Boxwood, Ebony, and Vegetable Ivory. Also in other shapes. List prices; see Drug List.

EVANS, LESCHER & WEBB

60 Bartholomew Close, LONDON.

Liverpool: EVANS, SONS & CO.

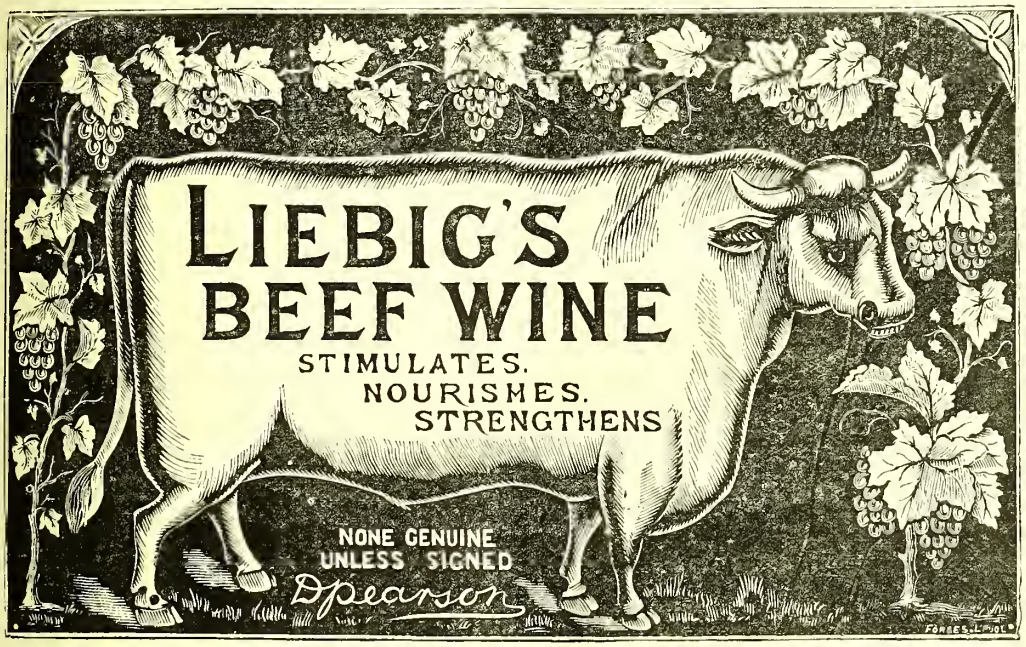
Montreal: EVANS, SONS & MASON (LIMITED).

AGENTS:

JAMIESON & CO., Produce Exchange, Sussex St., Sydney.

It is guaranteed that one glass of Liebig's Beef Wine contains more Nourishment and Strength than ten glasses of any other Wine.

GIVING QUALITIES.
Prize Medals Awarded—Liverpool and Glasgow, 1886 & 1887.



LIEBIG'S BEEF WINE (A).
Chief Ingredients—
Essence of Beef, Choice Port Wine, Extract of Malt, and Quinine.

NO WINE LICENCE NECESSARY FOR ITS SALE.—*See Letter from Excise.*

ints 2s. 9d., 21s. per dozen; quarts 4s. 6d., 39s. per dozen. Write for samples.

SOLE MANUFACTURERS—

IEBIG'S WINE CO., 66 and 68 Highfield Street, Liverpool, and 12 St. Helen's Place, London, E.C.

EVANS' SALINE. EFFERVESCING.

This preparation is a mixture, in definite proportions, of oward's Chlorate of Potash, English Tartaric Acid, Bicarnate of Soda, and a little Cane Sugar. The proportion of ese ingredients is fixed, and always remains the same. is, and the pleasant excess of acid, characterise Evans' line. A dry, mobile powder, dissolving perfectly.

Bottles with Chemists' Own Name, or in Bulk.

New artistic designs for wrappers for the season.

r further particulars as to price, &c., see Price List

EVANS' L. RICINI SINE SAPORE (TASTELESS).

is Castor Oil is *expressly and solely* manufactured for us. is produced by a process which removes the taste, though t the efficacious properties.

In W. Quarts, Tins, or Bottles with special Label.

VANS, SONS & CO., 56 *Hanover Street,* LIVERPOOL.

EVANS, LESCHER & WEBB, *60 Bartholomew Close,* LONDON.

CANADA:

VANS, SONS & MASON (Lim.), Montreal & Toronto.

AGENTS:

JAMIESON & CO., *Produce Exchange, Sussex St., Sydney.*

TEMPERANCE BEVERAGES.

A Sixpenny Bottle of

ADAMS'S EXTRACT OF HERBS

Will make 8 gallons of sparkling, wholesome, and refreshing

PRIME HERB OR BOTANIC BEER.

Unequalled in strength and richness of flavour by any preparation made from fresh herbs.

The Extract is very carefully manufactured, on the most improved scientific principles, from the herbs and plants gathered and dried at the proper season, when their virtues are in full vigour, thus retaining their invigorating and health-giving properties.

It makes an excellent beverage, giving natural flavour and colour, and a sparkling foam like bottled ale.

In Bottles, 6d. to make 8 gals.; 1s. to make 18 gals.; and 2s. 6d. to make 50 gals.

ADAMS'S GINGER ALE ESSENCE

makes a sparkling, refreshing, and invigorating beverage for summer and winter.

ADAMS'S SPARKLING FOAM PRODUCER.

One tablespoonful added to 2 gallons of the Herb Beer or Ginger Ale, just before bottling, gives a creamy foam like bottled ale.

Wholesale Agents,

W. EDWARDS & SONS, Queen Victoria St., London.

Specially favourable terms to large Buyers from the

PROPRIETOR,

B. ADAMS, Mansfield, Notts.

23

"SHERWIN" MACHINES

IN STOCK.

6	Disc Drug Mills ...	at	£5 each.
2	Edge Runner Mills	,,	£18 ,,
1	Rotary Screen Mill	,,	£60
3	,, ,,	,,	£80 ,,
1	,, ,,	,,	£140
2	Disintegrators ...	,,	£23 ,,
2	,, ...	,,	£40 ,,
1	,, ...	,,	£70
2	Bone Mills... ...	,,	£80 ,,
1	,, ...	,,	£140
12	Mixers, with Screen	,,	£1 ,,
4	,, ,,	,,	£1/12 ,,
3	,, ,,	,,	£3/10 ,,
2	,, ,,	,,	£7 ,,

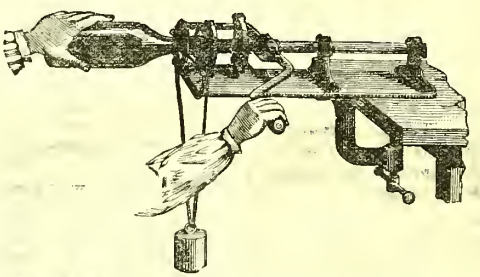
IN USE FOR

ALUM
BARK
BARYTES
CHARCOAL
COAL
DRUGS (many kinds)
GLUE
GLASS SLAG
GUANO
GYPSUM
HORNS & HOOFS
LIMESTONE
LOCUST BEANS
MANGANESE
SAND
SODA
SULPHUR
WOOL

GEO. E. SHERWIN, CENTRAL WORKS, **BIRMINGHAM.**

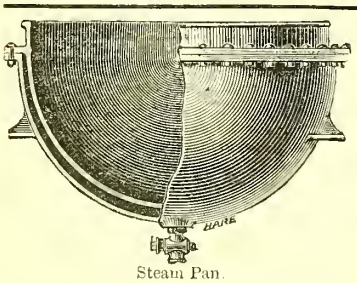
NEW CAPSULING MACHINE

The only Machine which leaves no crease or pleat on the Capsule.

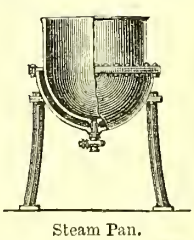


Can be fixed to a Counter. A single pull of the lever is sufficient to fix the Capsule

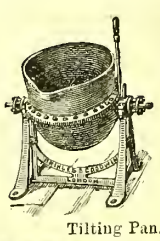
Patentee—C. MELIN, 37 Crutched Friars, LONDON, E.C.



Steam Pan.

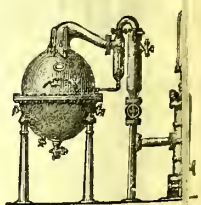


Steam Pan.



Tilting Pan.

Vacuum Pan, Condenser, and Air Pump.



MANUFACTURERS OF
Crushing and Grinding Machinery.
Boiling and Evaporating Machinery.
Paint and White Lead Machinery.
Food Preserving Machinery.
Fruit Preserving Machinery.

BRINJES & GOODWIN
FIELDGATE ST., LONDON,
ESTABLISHED 1829.

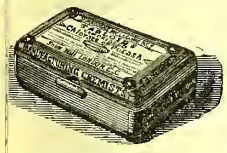
24

The Throat and Voice.

Chlorate of Potash Tabloids.

OR AFFECTIONS OF THE VOICE, THROAT, AND RESPIRATORY SURFACES GENERALLY.

By using these Tabloids the drug is effectually ·ought in contact with the oral mucous surfaces as continuous gargle, and its specific action made certain. In acute sore throat, Chlorate of Potash "usually relieves the uneasiness in a few hours" (Cohen). "It is used in ulcerated mouth and follicular pharyngitis, and has been employed in ·oup, diphtheria and spasm of the larynx" (Brunton). "Of convenient size, they are beautifully made; ıd, as they dissolve slowly in the mouth, are well ıited for throat affections."—The LANCET.



Retail price, 6*d*.

Supplied in beautifully graven white metal boxes, blue silk bel, at 4/ and 8/6 per dozen. Retail prices, 6*d*. and 1*s*.

Chloride of Ammonium Tabloids.

The solvent and discutient as well as antiphlogistic owers of Chlorate of Potash are well known, and ave led to its extensive employment, especially in ermany, in cases of sore throat and bronchitis, tended with abundant secretion of thick and tough ucus or phlegm. Physicians will at once appreciate ıe great advantage to their patients of the local effects this salt slowly dissolving and coming in direct ontact with the inflamed surface. It at once miti·ates the cough or irritation, and lessens expectoration. wo or three of the Tabloids will sometimes entirely lieve coughs that have long resisted treatment with rdinary remedies. One may be dissolved occasionally n the middle of the tongue, not near the tip.

Supplied in bottles, at 4/6 and 12/6 per doz. Retail prices, /. and 1/6.

Sal Prunella Tabloids.

"A popular remedy, sometimes successful in mild ases of incipient inflammatory sore throat, is a small iece of nitre allowed to dissolve slowly in the mouth" Waring). "An excellent saline for throat cases, having ery marked local efficacy when slowly dissolved on ıe tongue. It is a popular remedy, and for mild ıflamed sore throat its ancient reputation is de·erved.".

Directions.—One or more (5 gr.) Tabloids should e dissolved slowly in the mouth for the local effect.

Supplied in bottles of 100 at 22/ per doz. Retail price, 2/6.

Tabloids of Compressed Chlorate of Potash with Borax.

CHLORATE OF POTASH is proverbially known to quickly relieve hoarseness, irritation of the throat and bronchi, and when taken early may avert a cold.

BORAX has a high reputation for hoarseness and "clergyman's sore throat" (Waring). It is prescribed for aphonia and over use of the voice (Ringer), diphtheria (Budd), aphthous ulceration in phthisis (Watson), and cracked tongue (Brunton).

It is preventive of catarrhal troubles of the nares, throat, and larynx, and for those about to speak or sing is excellent to clear the voice.

The Tabloids afford an agreeable form in which to prescribe Borax.

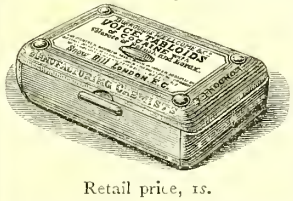
Potash and Borax Tabloids supplied in beautifully graven white metal boxes, pink silk label, 4/ and 8/6 per doz. Retail prices, 6*d*. and 1*s*.

Voice Tabloids.

The Voice Tabloids contain COCAINE, CHLORATE OF POTASH and BORAX.

CHLORATE OF POTASH is acknowledged to be of the greatest value in affections of the mouth and throat, relieving hoarseness, subduing inflammation, and sweetening the breath.

BORAX is highly esteemed for clergyman's sore throat, aphonia from over-use of the voice, diphtheria (Budd), aphthous ulceration in phthisis, and cracked tongue. Not only is it preventive of diseases of the nares, throat, and larynx, but taken a few minutes before speaking or singing will clarify the voice.



Retail price, 1*s*.

Cocaine has been much employed by throat specialists, and is highly valued in many affections of the pharynx and larynx. It allays irritability, and when not employed in too large doses, fuller, clearer, richer tones are alleged to follow at once upon its use. It relieves the dysphagia of phthisical laryngitis, and, indeed, pain in the throat from any cause whatever. The most agreeable form in which to prescribe Cocaine is in the Voice Tabloids with Chlorate of Potash and Borax.

Voice Tabloids supplied in beautifully graven white metal boxes, blue silk label, 8/ and 16/ doz. Retail prices, 1*s*. and 2*s*.

BURROUGHS, WELLCOME & Co., Manufacturing Chemists, Snow Hill Buildings, London, E.C.

Above Prices subject to our usual discounts.

Bottles containing 100 Tabloids, 24s. per dozen, subject to our usual discount; Retail at 2s. 6d.



SALEABLE NOVELTIES.

SACCHARIN.—The New Sweet Product from Coal Tar; 300 times sweeter than sugar, a powerful antiseptic, non-fermenting, and positively harmless to the human system.

SACCHARIN.—His Royal Highness the Prince of Wales, in his speech at the People's Palace, said: "A recent invention seems to show the taste of such a food as sugar can be imitated so as to defy detection."

SACCHARIN, says Sir Henry Roscoe, is "the most remarkable of all the marvellous products of the Coal Tar Industry."

SACCHARIN.—The Rev. C. H. Spurgeon writes: "I regard the discovery of Saccharin as a great blessing so far as my own health is concerned; and I am only one of thousands."

SACCHARIN is invaluable in the Nursery, since it cannot turn acid in the stomachs of children. It is recommended by the faculty where sugar is forbidden, in cases of diabetes, gout, rheumatism, dyspepsia, liver complaint, complication of the kidneys, and obesity.

SACCHARIN is a most delicate and delicious sweet, and never cloys the palate.

SACCHARIN may be used for all domestic purposes in the place of sugar; it is relatively as cheap and far healthier.

SACCHARIN is now sold in granular and tabloid form ready for immediate use.

SACCHARIN may be had in bottles, retailing at 2s. 6d. each.

BURROUGHS, WELLCOME & CO, SNOW HILL BUILDINGS, LONDON, E.C.



20s. per dozen, subject to our usual discount. Retail at 2s. 6d.

Jensen's

COD LIVER OIL.

The only Oil in the World guaranteed as made solely from perfectly fresh Livers, and therefore sweet and pleasant to taste and smell. Guaranteed non-congealable, and not liable to repeat.

ICEBERG BRAND,

In bottles only, to retail at 1s., 2s., 3s. 6d., & 6s.

Norwegian Oil in bulk, supplied in Original Barrels or in Winchesters, at prices according to quality and quantity, to retail under Chemist's own name.

HERTZ & COLLINGWOOD, 101 Leadenhall Street, Londo.

JOHN EVANS, 49 Dawson Street, Dublin. A. S. LASCELLES & CO., 108 Broad Street, New York.

Hearon, Squire & Francis,

Wholesale & Export Druggists,

Analytical Chemists.



Established at 95 Bishopsgat

Street 1714.

Specialities of the "Heron" Brand.

Cascara Cordial
(For Habitual Constipation).
Ess. pro Mist. Ferri Co.
Liquor Santal Co.
Pepsin Glycer. Acid.
Sol. Bismuth. Aromat.
Syr. Hypophos. Co.
Soluble Essences
(For Ærated Beverages).
Vin. Cocæ.
Cucumber Cream.
Cucumber Pomade.

PHARMACEUTICAL PREPARATIONS IN VACUO.

5 COLEMAN STREET, LONDON.

THE CHEMIST AND DRUGGIST

ESTABLISHED 1859.

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POST-CARD COMPETITION, 1888.

No. 4.

THE following are the candidates for the Pharmaceutical uncil in May:—

C. B. Allen	R. Hampson	G. F. Schacht
S. R. Atkins	W. Hills	C. Symes
A. Bottle	N. H. Martin	J. Watt
G. Evans	A. Nichol	G. S. V. Wills
T. P. Gostling	J. G. F. Richardson	
T. Greenish	J. Robbins	

We ask competitors, during the month of April, to name ose who they suppose will be the first three as they will me out at the election. We do not ask for figures, but we sh to have on post-cards three names selected from the ove list, giving in due order the probable first, second, and rd.

Competitors may be subscribers, or their families, or *employés*, but no competitor may, on this occasion, make more an one prediction.

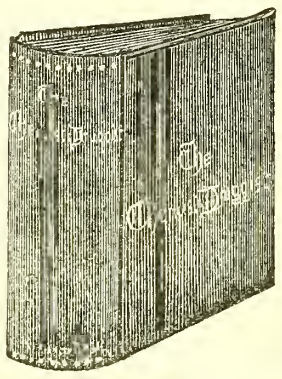
We shall only admit post-cards; and we shall refuse to xe in post-cards when we are surcharged for them. Competitors must therefore be careful to avoid any writing except the address on the address side of the post-card, such , for instance, "Post-card competition," &c.

If more than one card should give the names of the first ree in the right order, we shall not regard ourselves as ound to give a guinea to each, but shall divide the award as e think proper; but if no one names the three in the right der we shall give the guinea to the one who gets nearest the correct result.

THE Pharmacy Acts Amendment Bill is down for second reading for Friday of this week, and, so far, no notice of opposition has been given. It is doubtful, however, whether it will be reached.

THE CHEMIST AND DRUGGIST OF AUSTRALASIA, published monthly at our Melbourne office, can be supplied to subscribers outside Australasia at 5*s.* per annum, payable in advance, and commencing at any date. Chemists interested in the drug trade and the pharmaceutical affairs of the Australasian Colonies will find a full record of all events affecting their occupation in *The Chemist and Druggist of Australasia*. Single copies can be supplied at 6*d.* each. Application should be made by English or American subscribers to the office at 42 Cannon Street, London.

THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1*s.*, or by parcels post 1*s.* 3*d.*, or two for 2*s.* 3*d.* We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.



DIARY FOR NEXT WEEK.

Secretaries of societies are requested to send early information of approaching meetings.

Monday, April 9.

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Cantor Lectures. Mr. Richard Bannister on "Milk Supply, and Butter and Cheese-making."

Tuesday, April 10.

Royal Institution, at 3 P.M. Mr. Charles Waldstein, Ph.D., on "John Ruskin."

Wednesday, April 11.

Pharmaceutical Society, 17 Bloomsbury Square, W.C. Professor Dunstan and Mr. T. S. Dymond, on "The Preparation of Ethyl Nitrite."

Royal Microscopical Society, King's College, W.C., at 8 P.M. Dr. R. H. Ward on "Fasoldt's Test-plates."

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Ordinary meeting. Mr. Alfred Fletcher, Chief Inspector of Alkali, &c., Works, on "Recent Legislation concerning the Pollution of Air and Water."

Thursday, April 12.

Chemists' Assistants' Association, 103 Great Russell Street, W.C., at 9 P.M. Musical and Social Evening.

Liverpool Chemists' Association, Royal Institution. Discussion on the Pharmacy Acts Amendment Bill. Afternoon.

Royal Institution, at 3 P.M. Professor Dewar, M.A., Fullerian Professor of Chemistry, on "The Chemical Arts."

Friday, April 13.

Royal Institution, at 9 P.M. Professor Flower, on "The Pygmy Races of Men."

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Indian section. Mr. W. R. Robinson on "The Experiences of Twenty Years in conducting Agricultural Inquiries in Southern India."

Saturday, April 14.

Royal Institution, at 3 P.M. Mr. Carl Armbruster on "The Later Works of Richard Wagner."

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

THE MEDICAL INSTITUTE.—The annual meeting of the members of the Birmingham Medical Institute was held on Thursday of last week at the institute, Edmund Street, Dr. James Johnson presiding. The annual report stated that the ordinary income for the year fell short of the expenditure by about 50*l.* Dr. Saunby moved the adoption of a code of by-laws in favour of the admission of dentists as subscribers to the library without sharing in the government of the institute. Mr. F. Marsh seconded the motion, and it was agreed to.

CHARGE AGAINST A COMMERCIAL TRAVELLER.—At the police court on Tuesday, before Sir R. A. Kettle, Richard Walters (47), commercial traveller, was charged with embezzling from his employers, Day & Sons, cattle-medicine manufacturers, Crewe, three sums of money, amounting to 6*l.* 4*s.*, between November 5 and December 3 last. It was stated that prisoner entered into Messrs. Day & Sons' employ at the beginning of 1886 to take orders, &c., and collect accounts. For this prisoner was paid a stipulated salary of 60*l.* a year, a commission of 25 per cent. on all orders he obtained, and 5 per cent. on money collected. The payment of two sums, one of 3*l.* 1*s.* and the other of 19*s.*, to prisoner having been proved, Alfred Sylvester Day, a partner in the firm, produced a receipt in prisoner's handwriting for 2*l.* 4*s.*, purporting to be given to Mrs. Rogers, who could not be present. Witness deposed to the receipt being in prisoner's handwriting. In cross-examination witness admitted that up to November 12, 1887, the prosecutors had debited prisoner's salary account with sums which had been omitted from his cash statements. They wrote to the prisoner regarding these discrepancies, and prisoner wrote back asking for these to be debited to his salary, but instead they dismissed him, and these proceedings were commenced. Although prisoner's salary was 60*l.*, witness admitted that prisoner had never received for any year more than 25*l.* For the defence, Mr. Boddam urged that it was really a county court case, and that it was only made a criminal one that prisoner's mouth might be kept shut. The jury acquitted the prisoner now, and he was discharged. The prisoner was tried and acquitted at the last sessions on a similar charge.

BRADFORD.

SUSPECTED CARBOLIC ACID POISONING.—An inquest was held here last week on the body of Lily Holgate (11), who died in the Bradford Infirmary from poisoning by carbolic acid. Dr. Denby, one of the infirmary medical staff, gave it as his opinion, without making a post-mortem examination, that carbolic acid poisoning was the cause of death. The father and several brothers of deceased, and other witnesses gave evidence, from which it appears that Mrs. Holgate was attending a Salvation Army meeting when Lily was seized with illness. The child was an invalid, and her father was in the habit of giving her port wine and cod-liver oil. He stayed at home with her on the night in question, and while he attended to a horse and went to meet his wife Lily had fallen asleep. When they returned the child was found in an apparently sinking condition, she had been vomiting, and there was a strong odour of carbolic acid and sulphur about the room. The vomit smelt of carbolic acid. The inmates of the house averred that there was no carbolic acid in the house. The evidence so far not showing how the poison was administered to deceased, the inquest was adjourned, the stomach and other organs of the deceased being handed over by the police to Mr. Rimmington, borough analyst, for investigation.

DERBY.

CHEMICAL EXPLOSION.—Last week there was a serious explosion at the Stoney Middleton Vicarage. Mr. George Smith, son of the vicar, was experimenting in the tchen, when an explosion took place, and he narrowly scaped being killed. The fire range was completely d royed, both oven and boiler, the bars from the fire gra going through the door and window, and were found yar away outside. The window was blown out, and the d r was split into matchwood, the tables and drawers being roken. An iron flask which Mr. Smith was using went rough the ceiling into a bedroom above, taking the carpet f that room with it, and disarranging the furniture. A b about 11 years of age was found among the ruins of t table unhurt, with the exception of his hair being singed d his clothes burned with the chemicals. A servant w was present had her bonnet blown off her head, and her ir was singed, but she was otherwise unhurt. Mr. Sm was blown on to the top of the sink stone. He was con ed to Dr. Fentem's surgery at Eyam, and examined by tha entle-man, who found that he was not seriously injur The damage to the house and furniture is estimated at ab t 50*l.*

HUDDERSFIELD.

FIRE.—A fire occurred in Messrs. Needham l thers' chemist's shop on March 29, which fortunately wa extin-guished before much harm had been done. One f the assistants, it appears, was in the cellar pouring some b zoline into a bottle, when the spirit became ignited.

LEEDS.

THE CHARGE AGAINST A CHEMIST'S ASSISTANT.—At the Leeds Borough Police Court on Saturday, Mr. Br e, the stipendiary magistrate, heard further evidence in the harge against Owen Stafford (26), chemist's assistant, orley. Detective-officer Slingsby stated that the Gosport pol had again been communicated with, but, though inqui s had been made, no such person as Mrs. Acton, whom the soner said he had given the child to, could be found. After hearing the evidence and several depositions, Mr. Br e discharged the prisoner, saying that there was not his opinion any evidence upon which he would be jus ed in committing him for trial.

LIVERPOOL.

CHEMISTS' ASSOCIATION.—The fortnightly meeting f the members of this association was held in the Royal Ins ution on the evening of March 29, Mr. A. H. Samuel, the pr dent, in the chair. The subject for discussion for the even was the Pharmacy Acts Amendment Bill. The attendanc how-ever, was unusually small, there being only six o even members present, and the chairman suggested that t dis-cussion should be adjourned. Probably the weather a l the near approach of the holidays accounted for the mall attendance. Dr. Symes spoke in favour of an adjour ent, as the meeting, he said, was by no means represenative of 300 members on a matter of this kind. It was ag d to adjourn the discussion till April 12 (afternoon), and send out a special circular.

MANCHESTER.

SOCIETY OF CHEMICAL INDUSTRY.—The annual m ting of the members of the Manchester section of the Soc y of Chemical Industry was held in the rooms of the Ch ical Club, Victoria Hotel, on Tuesday. Dr. Schunck pr ded. The only business before the meeting was the election the committee for the ensuing year. By the rules of the s iety the committee was elected in the first instance for ree years, but provision was made for five members to tire annually, these being eligible for re-election. Lists were submitted to the meeting which contained the names the whole of the committee, the names of the five retiri by rotation being printed in italics. The members were ow-ever, informed that they could substitute any other na for election in place of a non-retiring member. Mr. J. gell and other members expressed a contrary opinion, s ing that those not retiring could not be interfered with. The chairman ruled otherwise, and the ballot papers were led up, as if the whole committee were only elected ann lly.

This led to a protest, and ultimately to a resolution, which was agreed to, that the rule should be sent to the council of the society in London for correct definition. The following gentlemen were elected the committee:—Drs. Bayley, Grossmann, Liebmann, and Schunck, and Messrs. J. Angell, J. Carter Bell, R. F. Carpenter, C. Cawley, A. G. Perkin, H. Grimshaw, P. Hart, F. B. Benger, I. Levinstein, W. E. Heys, and C. Truby. The only change was that Mr. W. E. Heys was elected in the place of Mr. W. Thomson, who happened to be one of the retiring five.

RHYL.

Sea-water made Drinkable.—Mr. George J. Hazlehurst, of Rhyl, a justice of the peace for Flintshire, describes, in a communication to the *Liverpool Daily Post*, the results of prolonged experiments he has made with the view of rendering sea-water drinkable and innocuous by the introduction of foreign elements. Mr. Hazlehurst claims to have invented a compound which he calls "Thalassion," and which consists apparently of a saline effervescent with some astringent ingredient, which, mixed with sea-water, makes it drinkable. From eight o'clock on the morning of March 20 till the 27th of the same month Mr. Hazlehurst—according to the testimony of two medical gentlemen—drank no liquid except sea-water mixed with "Thalassion," and required no medical assistance. Accompanying Mr. Hazlehurst's statement are certificates from two medical gentlemen who attended him during the week he submitted himself to the experiment. Both gentlemen state that "during this period, whilst pursuing his ordinary avocations, he has abstained from all liquids, and has adopted a diet as far as possible devoid of moisture, and that, solely by means of his patent 'Thalassion' and the inhalation of alcohol and sea-water, he has not been seriously affected by thirst, or has his physical condition been notably affected."

ULVERSTON.

Dispute between Chemists.—In the Manchester Chancery Court on March 29, Mr. Roche applied on behalf of George Mackereth, chemist, Ulverston, for an interim injunction to restrain William Guest Dean, chemist, of the same place, from selling a preparation, or a colourable imitation thereof, of a certain mixture. The defendant appeared in person. Defendant was formerly in the employ of Mr. Quarrie, who carried on business at Ulverston, and held the secret of a preparation for the "cure of rheumatism." The defendant left Mr. Quarrie's service last December, and in January this year Mr. Quarrie sold his business, and assigned his interest in the specific to the present plaintiff. The defendant, however, continued to prepare the mixture and sell it. In consequence, this action was entered against him. The Vice-Chancellor ordered the matter to stand over to the Liverpool sitting, in order that the defendant might obtain assistance. In the meantime he must keep an account of all sales.

SCOTLAND.

DUNDEE.

The Charges against Dr. Letters.—In the Sheriff Court on March 30 a petition was presented to Sheriff Campbell Smith for the liberation on bail of Dr. Letters. The request was granted, and bail was fixed at 70*l*.

EDINBURGH.

The death is announced of Mr. John Wilson, Emeritus Professor of Agriculture in the Edinburgh university. The deceased gentleman, who was in his 76th year, was a native of London, and held the principalship of the Royal Agricultural College, Cirencester, before he was appointed to the Edinburgh chair in 1854.

Dr. Thomas Keith, the celebrated ovariotomist of this city, proposes to remove to London at an early date. His two sons, who are also specialists in abdominal surgery, and several of Dr. Keith's specially trained nurses will follow him to the south. Dr. Keith has resigned his position as ovariotomist to the Edinburgh Royal Infirmary. At a meeting of the managers held this week expressions of regret and acknowledgments of Dr. Keith's eminent services were made.

The Royal Society.—At Monday evening's meeting of this society, Dr. John Murray communicated a paper by Mr. A. Dickie, of Glasgow, on the chemical analysis of water from the Clyde area based on an examination of between 150 and 200 samples of water. The analysis showed that, starting from the Mull of Kintyre, the water contained less salt towards the head of the estuary, and that in the lochs the bottom waters contained more salt than the surface waters. Professor Crum Brown communicated a paper by Dr. Chandra Ray, in which he treated of the tendency of sulphates of the copper-magnesium group to combine with one another in definite atomic proportions.

Chemists' Assistants' and Apprentices' Association.—At the meeting of this association held last week, Mr. George Lunan communicated two notes, of which the following are abstracts:—

Hypophosphorous Acid.—Mr. Lunan has previously shown that commercial samples of this acid are contaminated with calcium oxalate, which is decidedly objectionable. He has since tried the barium process, but has not found it to be satisfactory. On further trial, the oxalic acid method was found to be satisfactory when used as follows:—

Hypophosphite of lime	3,727 grains
Distilled water	80 fl. oz.
Dissolve.	
Recrystallised oxalic acid	2,765 grains
Distilled water	20 fl. oz.
Dissolve.	

Mix the two solutions; filter and wash the precipitate up to 150 fluid oz. Heat to 100° C.; set aside for five days; filter from the precipitate, and evaporate until the product measures 1 pint, or is of a specific gravity of 1·1367, which corresponds to 30 per cent. of acid. Calico or white filtering paper should be used for filtration.

The following are the tests which the author proposes for the acid:—Specific gravity 1·1367; should give no precipitate, or only a very faint one, with solutions of oxalate of ammonia, chloride of barium, sulphate of lime, or perchloride of mercury. When neutralised with ammonia and heated with solution of acetate of lime containing excess of acetic acid only a faint cloudiness should be perceptible.

Syrupus Ferri Hypophosphitis.—In this note the author stated that, as the result of further experiment, he agreed with Mr. Lawson's opinion regarding the formation of ferric hypophosphite (The Chemist and Druggist, January 21). He found that if ferrous carbonate be much washed it is partly changed to the ferric state. He disapproved of the Unofficial Formulary process for making the hypophosphite of iron by double decomposition of ferrous sulphate and calcium hypophosphite, and advocated a process which is identical in principle with that employed in making the ferrous hypophosphite for liq. ferri hypophos. co. B.P.C., but using, instead of carbonate of soda, the bicarbonate. Mr. Lunan showed some samples of drugs and preparations, and thereafter there was a discussion on some queries initiated by Mr. Hill.

ELGIN.

Chemists' Assistants' and Apprentices' Association.—A meeting of this association was held on March 30. Papers were read by Mr. Mawat, on "Photography," and by Mr. McCulloch, on "B.P. Unguenta." The association has rented a suitable room in Thunderton Hall, to be used as a place of meeting, pharmaceutical museum, and chemical laboratory. It was decided to have botanical excursions in connection with the association during the ensuing summer.

GLASGOW.

At a meeting of the Faculty of Physicians and Surgeons, held on Monday, Dr. Hector Cameron was appointed representative to the General Medical Council, in room of the late Dr. Scott Orr. Dr. Cameron had a majority of four votes over Dr. M'Vail, who has acted as *interim* representative.

The Pharmacy Acts Amendment Bill.—A meeting of the local chemists was convened in Holton's Hotel on March 23, for the purpose of considering the Pharmacy Bill, when a dozen persons responded to the invitation, and Mr. Robert McAdam, of the Glasgow Apothecaries' Company,

occupied the chair. After the chairman had introduced the subject there was considerable discussion, in the course of which Dr. David Lees, M.P.S., referred to the practical uselessness of class lectures, his opinion being derived from his own experience as a medical student, during which he found that text-books and tutorial teaching were relied on. Mr. Kinninmont gave it as his opinion that the enforcement of a curriculum would drive all the young men into the medical profession, as the expense would be nearly the same and the position to be acquired much superior. Other speakers followed on similar lines, the general belief being that the curriculum is uncalled for in the interests of the public, and would prove injurious, both to masters and assistants. Even if the demand for increased education could be made out, it was held that this could best be effected by a change in the present examination, and not by compelling attendance at any prescribed course of lectures. More satisfaction was expressed regarding the branch shop clause, but it was contended that it is objectionable, in so far as it does not touch the open shops of medical men which are managed by unqualified assistants. Ultimately a committee, consisting of Mr. Daniel Frazer (convener), Dr. Lees, and Mr. McAdam, was appointed to draw up a petition against the Bill. It was also agreed to recommend that all chemists opposed to the Bill should at once write to their members of Parliament, stating shortly their objections and asking them to to vote against the Bill when it comes up for second reading, or at least oppose the clauses objected to.

The committee referred to has drawn up the subjoined petition embodying the objections which they see to the proposals, as follows:—

We believe that the Pharmacy Acts Amendment Bill will, if passed into law in its present form, injuriously affect our interests as tradesmen, without bringing any compensating benefits to the general public in whose interest the Bill is said to be necessary. We hold that with the examinations now in force, together with the practical experience required of candidates, by the existing Pharmacy Act of 1868 and its several amendments, the safety of the public is already most amply guarded.

We believe that if any further restrictions—in the form of increased stringency in the qualifying examinations for the admission of apprentices and assistants into our trade—be passed, or any addition be made to the already heavy expenses incurred in passing them, that the effect will be greatly to reduce the entrants to the various examinations, and the consequent diminution of legally qualified assistants, and ultimately and very directly a great reduction in the number of "open shops for retailing, dispensing, or compounding poisons," carried on by qualified pharmacists; while, on the other hand, it will lead to a still further increase in the already large number of limited liability companies, such as stores, grocers, &c., established for "retailing, dispensing, or compounding poisons," by persons who themselves have no legal qualification for conducting such a business.

If the compulsory curriculum of study sought to be established by the proposed Act should be carried, its immediate effect all over the country will be most disastrous. The classes of the population from which the great bulk of the pharmacists of the country have hitherto been drawn cannot afford to send their sons for twelve months or more to the very few centres where a *recognised* school or college would be found, during which time they would not be free to earn a livelihood as assistants; and the higher classes, who might otherwise afford it, would not do so, because that for a similar, or for a very little extra, expenditure a full medical curriculum can be gone through, with the result that all who pass it not only qualify as surgeons or physicians, but become thereby qualified to keep "open shop" as pharmacists in addition. We hold that the Pharmaceutical Society should have no right to regulate where and when the knowledge shall be obtained.

Further, whilst approving of clause 3 in the Bill, which directs that "It shall be unlawful for a duly qualified keeper of an open shop for retailing, dispensing, or compounding poisons, to keep open shop in more places than one, unless each branch shop shall be *bona fide* conducted by a duly qualified registered assistant," we are opposed to its passing into law so long as surgeons and medical practitioners are permitted by law to keep one or more "open shops" (as they frequently do, and that especially in Scotland) for retailing, dispensing, or compounding of poisons and medicines without the necessity of having any legally qualified assistant in any of them. Physicians and surgeons, from the very necessity of their profession as practitioners, are liable to be almost continuously absent from their respective premises, yet, in the great majority of cases, their "open shops" are managed or conducted by young and *legally* unqualified men, boys, or girls.

Should, however, clause 3 pass into law, we hold that the civil as well as the criminal responsibility attached to the proper conducting of each shop should no longer rest on the proprietor of these branches, but shall only extend to the proper conducting of the head establishment where he personally conducts it.

The petition is being circulated for signature, and the committee is making every endeavour to get the unanimous support of the trade on the question. They show by extracts from the reports of Dr. Greenhow and Sir Douglas Maclagan, the Privy Council representatives at the Pharmaceutical examinations, that these examinations are a sufficient test of fitness, and that they guarantee perfect safety to the public. We understand that the Glasgow chemists are very sincere in their opposition, and that the decision which they have arrived at has been influenced by the fact that druggists are being driven out of the trade and their shops closed. Where businesses are sold at all they are purchased by surgeons, who consider themselves outside of the Pharmacy Act.

MOFFAT.

FIRE.—A small fire occurred on Saturday last in the shop of Mr. Thomas Hetherington, druggist, High Street. It was occasioned by a lighted match being thrown among some straw and packing material in the cellar.

Trade Notes.

MESSRS. H. W. DALTON AND H. F. MONSARRAT, trading as East India and colonial brokers, under the style of H. Dalton & Co., have dissolved partnership. The business will be continued at the same address (17 Mincing Lane, E.C.) by Mr. Monsarrat, under the style of Herbert Frederick Monsarrat.

MR. RICHARD RAIMES, in a circular regarding the change in his firm intimated last week, states that he has arranged to give Mr. W. A. Davies and Mr. Wm. Duff, who have been in the employment of Raimes & Co. for over thirty years, a direct interest in the Edinburgh business; and Mr. Scrutton, who has been for a like number of years at York, a similar interest in the business there.

A TICKET-WRITER is advertising in a contemporary cards for margarine; and, anxious to meet what he supposes to be the desires of his clients, he announces:—"These tickets are specially suitable where small light tickets are required. *They have the advantage over others of not being so easily read.* Either pattern can be fitted with movable figures in the centre at 6*d.* each figure.—Net cash with order."

NEW COMPANIES

UNIVERSAL DIGESTIVE TEA COMPANY (LIMITED).—Capital, 20,000*l.*, in 10*l.* shares. Objects, to acquire the exclusive right to the sale and preparation of tea in accordance with the patent rights of Harrison Jackson, tea dealer, Whaley Bridge, near Stockport.

ALLIANCE OF MINERAL-WATER MANUFACTURERS' ASSOCIATION (LIMITED).—Capital, 2,000*l.*, in 1*l.* shares. Object, to establish a central association for the benefit of the Mineral-water Manufacturers' Association of Liverpool and District. The subscribers are:—Simon Jude, Liverpool, chartered accountant; R Foote, Liverpool; J. Hughes, Kirkdale; J. M. Smyth, Liverpool; S. H. Cox, Manchester; J. Pitt, Manchester; and T. W. Lawson, Manchester, mineral-water manufacturers.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE Council met on Wednesday at 11 A.M., Mr. Michael Carteighe, President, in the chair, and with him, at this hour or later on, were all the members except Mr. Hampson. The minutes of the former meeting were read and confirmed, and a number of persons were made adherents of the Society, after which the Secretary intimated that two persons had been restored to the register of chemists and druggists on payment of a fine.

MR. EVANS HAS RETURNED.

Mr. GWILYM EVANS, who for several months has been absent in India, at this point asked the President, if young men who had passed examinations in India came here, would they be allowed to enter for the Minor examination without passing the Preliminary? He asked because he knew that there were some in India, qualified so far as qualification went there, who were desirous of coming to England to study and qualify.

The PRESIDENT said that this was a question which he could not answer off-hand. The Council had power to accept evidence of preliminary training, but they could not forego the Preliminary examination or its equivalent.

Mr. EVANS asked if the certificate of having passed a college examination would be accepted

The PRESIDENT replied that it might be if the examination had included English and arithmetic. [Mr. BAILDON: And Latin]

Mr. BOTTLE said that if the Council was satisfied of the nature of the examination they could accept the certificate.

Mr. EVANS said that he had no doubt that the qualification in India necessitated a preliminary examination; but he hoped to get fuller information on the subject.

A NEW CHEMIST.

The REGISTRAR here intimated that he had received the necessary declaration and fees from Mr. Henry Reynolds Sandford, of 63 Regent's Park Road, London, N.W., who was in business in this country before 1868, and had been abroad. In reply to questions, the Registrar stated that he had made inquiries, and was satisfied that Mr. Sandford's declaration was genuine.

NOMINATIONS FOR THE NEW COUNCIL.

The SECRETARY read a list of twenty-six persons who had been nominated for the vacancies created by the recent ballot, and of these the following sixteen had intimated their willingness to accept office if elected.

Allen, Charles B., 20 High Road, Kilburn, N.W.
Atkins, Samuel Ralph, Salisbury
Bottle, Alexander, Dover
Evans, Gwilym, Llanelly
Postling, Thomas Preston, Diss
Greenish, Thomas, 20 New Street, Dorset Square, N.W.
Hampson, Robert, 205 St. John Street Road, E.C.
Hills, Walter, 225 Oxford Street, W.
Martin, Nicholas Henry, Newcastle-on-Tyne
Nichol, Anthony, Carlisle
Richardson J. G. F., Leicester
Robbins, John, 147 Oxford Street, W.
Schacht, G. F., Clifton, Bristol
Symes, Chas., Liverpool
Watt, James, Haddington, N.B.
Wills, George S. V., Arundel Lodge, Tulse Hill, S.E.

The following ten declined, or had not expressed willingness, to accept office:—

Burdas, Isaiah, London
Davenport, Horace, London
Gin, Charles, London
Harrison, John, Sunderland
Haydon, Wm. F., Birmingham
Mackenzie, James, Edinburgh
Radley, W. F., Southport
Squire, Peter W., London
Swinn, Charles, Manchester
Woolley, George S., Manchester

The five gentlemen who at present act as auditors, and no others, had been renominated, viz, Messrs. Wm. Hodgkinson, J. K. Hopkin, F. W. Lescher, S. L. Stacey, and W. M. Watts, all wholesale druggists in the City of London.

Following on the foregoing, Mr. ATKINS asked if Messrs. Radley and Woolley had declined to accept office again.

The PRESIDENT: Yes, unfortunately; but they remain members of the Council until May, and reference will be made to their retirement in due course.

FINANCE.

In the course of the reading of the report of the Finance Committee, when the Secretary came to the recommendation of the committee to invest 400*l.* of the benevolent fund donations in the new 2¾ per cents.

The TREASURER (Mr. Robbins) said that there remained 125*l.* of that money which might be invested, and he thought that power to invest 500*l.* might be given. In reply to inquiries, he said that the money was that received as donations. A new account for such money had been opened at the beginning of this year, and it was intended to invest the money as it accumulated.

In consequence of this statement there was a general conversation regarding the powers of the Benevolent Fund Committee and the Finance Committee as regards investments. A suggestion was made that the recommendations for the investment of Benevolent Fund moneys should come direct from the committee of that fund, and some one suggested that the fund should be taken entirely out of the hands of the Finance Committee. But these suggestions led to nothing, although it was generally agreed that power should be given to the treasurer to invest 500*l.* at present.

The Secretary then continued the reading of the report, which showed unusually large receipts, owing to the payment of examination fees and annual subscriptions. The payments were of the routine character, and included one of 102*l.* for the research laboratory.

Mr. BUTT asked what this payment meant. He understood that no payment was to be made until work commenced, and the laboratory was not yet ready for work.

The PRESIDENT replied that the payment was partly for fittings, and came out of the vote of 300*l.*

Mr. SCHACHT added that the payment commenced on January 1; but he thought it was unnecessary, the Council having already voted an annual sum, to enter into detail every month.

With this the PRESIDENT evidently agreed, saying that would only be necessary to give an account of expenses at the end of each year. In moving the adoption of the report, he said that it would be advisable, as suggested by the treasurer, to invest 500*l.* of the Benevolent Fund money. He explained various items in the accounts, amongst which was the sale of 2,000*l.* of new 3 per cents. for 2,010*l.*

Various small items in the account having been commented upon, attention was called to some items recommended for payment, such as 100*l.* to the architect, and 600*l.* to the contractors in respect of fittings for the examination-hall and research laboratory. Mention was then made of Mr. Goschen's conversion scheme, which would necessitate the reinvestment of a portion of the Society's funds as well as a small amount of the Benevolent Fund, and various other invested moneys, such as the Pereira, Bell, and Hanbury memorial funds. The committee asked power to reinvest in the new 2¾ per cents., the PRESIDENT adding that, as Mr. Goschen was the master of the situation, the Council could not do better than the committee proposed.

Mr. SCHACHT thought that the question of conversion ought to be discussed. There might be more profitable ways of investment.

In reply to a question by Mr. Richardson, the PRESIDENT said that it was customary to invest Benevolent Fund money in ground-rents when there was enough of it for the purpose; and in reply to Mr. Symes he explained that the 600*l.* for fittings included benches, cupboards, cases, &c. in the research laboratory and preparation-room for the professor of chemistry. The work was done under the superintendence of the architect.

Mr. SYMES remarked that it might be considered a part of the building, but if it referred to the research laboratory only it seemed a large sum to pay.

To this the PRESIDENT replied that it would of course come out of the sum of 300*l.* which had been voted for fitting the laboratory, but only part of the 600*l.* was on account of that.

Mr. RICHARDSON asked if it was contemplated to invest the whole of the Benevolent Fund in ground-rents, and the PRESIDENT replied that he thought so, but they had to be careful as to what they invested in, as, once invested, they

could not according to by-law realise again. After some further conversation on this point,

Mr. BOTTLE asked what was meant by "fitments" and "fittings"; were they the same thing, or different? The President having explained,

Mr. EVANS asked what had been the cost of the examination-hall and research laboratory up to date. Owing to his absence from the country he had not been able to follow the accounts as he would have liked, and he was rather mixed up.

The PRESIDENT: I should think you would be (laughter), seeing that you have been away. The whole of the accounts would be submitted in due course.

The Council then, on the motion of Mr. Schacht, went into Committee to consider the investment of funds, and on resuming, the motion to attach the seal of the Society to the necessary documents was agreed to.

BENEVOLENT FUND.

Three applications for relief had been considered, in two of which grants of 10*l.* each were recommended, one of the applicants being placed on the provisional list of candidates for annuities. The third applicant received a grant of 5*l.* One case had been reconsidered, but no grant was recommended. The report was agreed to.

LIBRARY, MUSEUM, LABORATORY, AND HOUSE.

The Librarian had reported to the committee that the attendance during February was 658 during the day, and 177 in the evening. The attendance at the Museum during the same period was 689 during the day and 137 in the evening. The committee recommended that the front examination-room should be used temporarily for practical microscopical work in botany and materia medica. The resolution which had been proposed by Mr. Symes in regard to local secretaries reporting annually on the condition of pharmacy and pharmaceutical education in their districts, had been considered, and the committee recommended that such reports be required only when necessary.

The PRESIDENT, in moving the adoption of the report, said that the classes in the School of Pharmacy were this session unusually large, and the Professor of Botany required extra space for his demonstrations. Mr. Holmes also desired his students who were going in for the Major to do microscopical work, and for these reasons the committee recommended the use of the front room. The decision about Mr. Symes's resolution would, he thought, be agreed to, as it was felt that an annual report would be irksome to some of their secretaries who were not so zealous as others. He also explained, in reference to the order to paint the outside of the building, that he had spoken to the painters, and had got from them a reduction of 10 per cent. from the previous charge.

Mr. RICHARDSON: What about knocking off the stucco and restoring the brick surface? There was a suggestion about that.

The PRESIDENT: Oh! we can't do that.

A Member: Too expensive.

MORE AWKWARD QUESTIONS.

Mr. EVANS here pointed out that according to the annual statement a sum of 5,491*l.* had been spent on the new building up to the end of 1887, and he wished to know how much had been spent since.

The PRESIDENT said he could not exactly say, but he thought about 7,400*l.* altogether.

Mr. EVANS then asked what was expected to be the total expenditure on this account, and how far the original estimate had been exeeeded.

Replying to this, the PRESIDENT remarked that each item of the expenditure had been, and would be, carefully considered by the Council and voted upon.

The report was then adopted.

BUILDING COMMITTEE.

This committee reported that the Secretary had received a letter, stating that the new examination-hall had been valued at 360*l.*, and would be rateable at 300*l.* The Secretary had been instructed to appeal against this decision. An application from the editor for better accommodation had been considered, and decision deferred. The committee recommended the purchase of hat racks and eight new tables for the examination-hall.

The PRESIDENT moved the adoption of the report, and explained why the racks and tables are required.

Mr. SYMES asked if the existing tables would not do.

The PRESIDENT said that they would be utilised, but it was the intention to give each examiner a table for himself, and these new tables would be useful when made into one for any other meeting held in the hall.

The report was adopted.

THE CONVERSAZIONE COMMITTEE

recommended in a report that cards should be sent to invited guests and to the adherents of the Society. The officers of the Society would be asked to assist the committee in providing objects of interest for the inspection of visitors. The committee had, after careful consideration, decided not to admit ladies, as the accommodation was insufficient.

In reply to Mr. Bottle, the PRESIDENT explained that this decision would not exclude the ladies who were adherents of the Society, and who could be present as a matter of right.

Mr. SCHACHT presumed that the whole of the premises would be thrown open with only the one little door, about 3½ feet wide, communicating between the back and front buildings. That was a very serious matter. Could not a larger way of communication be provided?

The PRESIDENT said there would be no difficulty about that, but it would cost money. The present passage was too narrow to admit of ladies being present. Mr. Carteighe was then subjected to a broadside of questions about the matter, and in the course of his replies explained that music, refreshments, and objects of interest would be provided in order to kill time. But the committee would endeavour to make the affair a conversazione rather than a spectacle. Mr. Richardson having funnily suggested that there was a second way of communication between the buildings, viz., through Pied Bull Yard and the square to the museum building, the President said that no doubt some would like to take the walk that way, and they would not be prevented. Ultimately the report was adopted, amidst evident regret at the loss of the ladies.

NEW HONORARY MEMBERS.

After ten minutes' talk in committee regarding the nominees for the vacancies in the favoured fifty, the PRESIDENT moved that Professor Schaer, of Zurich, Julius Sachs, the celebrated botanist, and Mendeléeff, the eminent Russian chemist and co-discoverer of the periodic law, be nominated for election at next meeting of the Council. This was unanimously agreed to.

THE AUDITORS' REPORT

was then placed upon the table, as was also the following:—

Report on the Examinations held by the London Board of Examiners of the Pharmaceutical Society during the year 1887.

These examinations have been conducted on the same lines as in former years and require no special observation, neither have I any fresh suggestion to make as to the mode in which they are conducted, nevertheless, adverting to the recommendations I have made on several former occasions I venture to express a hope that an amended Pharmacy Act may be passed during the present session of Parliament, enabling the Pharmaceutical Society to prepare for the sanction of the Privy Council additional by-laws, providing that a Preliminary examination in Latin, arithmetic, and English shall be passed previous to the commencement of apprenticeship; and that an apprenticeship or definite pupilage of at least three years, shall intervene between the passing of the Preliminary examination and a candidate being admitted to the Minor examination.

The new and more commodious rooms in which the examinations are henceforward to be held are now completed, and will be used for the examinations in February.

It will then be practicable to carry out the recommendation I made last year, that the examination in practical dispensing should be extended, so as to give the candidate a longer and more definite time for the work, and a greater number and variety of prescriptions to dispense. At pres

they are expected to dispense two articles, and an hour is considered a fair allowance of time for that purpose. It is in fact much longer than would be required or could usually be allowed in a chemist's shop, and yet many candidates take much longer.

Considerable allowance is, however, properly made for the fact that these young men are often nervous under examination, and are working at a strange counter and under the immediate inspection of the examiner. The alteration which has been agreed to by the Board of Examiners might be introduced at once, without inflicting any hardship upon the candidates.

My other recommendation, that the examination in pharmacy should be made more practical, each candidate being required to prepare some one or more definite officinal compound according to the form given in the British Pharmacopœia, will also, I trust, soon receive the attention of the Board of Examiners. Its adoption will require some consideration as regards the details, and would necessarily involve the spreading of the examination over two days. This division of the examination would, however, be an advantage to the candidates, provided the two days were consecutive, the strain consequent on being examined in six subjects on the same day being avoided.

In reference to practical dispensing, in which so many candidates fail to pass, I may observe that the Council of the Pharmaceutical Society has instituted a class for practical dispensing in connection with the School of Pharmacy in Bloomsbury Square. This class will doubtless be of much advantage to those students who attend it, but it cannot supersede the necessity for the practical training and skill which would be acquired during an apprenticeship of several years' duration served under a competent master.

Preliminary Examination.—This examination was conducted as usual by the College of Preceptors. The number of candidates examined was 1,373, of whom 720 passed and 653, or 47·56 per cent., failed, being a rather smaller proportion than usual.

The rejections were caused in 19 cases by failure to obtain the proper number of marks in the whole examination, although the minimum passing number of marks had been gained in each separate subject; 138 candidates failed in all the subjects, Latin, arithmetic, and English; 189 in Latin, either alone or taken together with one of the other subjects; 315 in arithmetic, or in that subject together with either Latin or English; 193 in English alone, or in conjunction with Latin or arithmetic.

Minor Examination.—867 candidates presented themselves for this examination during the year, 405 of whom passed and 462, or 53 28 per cent., failed. Of these latter 67 were rejected because they did not earn the aggregate number of marks required by the regulations upon the whole examination, though they had gained the minimum passing number of marks in each separate subject. The largest number of rejections was for practical dispensing, in which 157 candidates failed; 77 failed in chemistry; 55 in pharmacy; 50 in reading prescriptions written in Latin; 41 in materia medica, and 37 in botany. It is the practice, when a candidate fails in any one subject, unless he is found to be thoroughly incompetent, to continue his examination until he fails in a second or third subject, under other examiners.

This is fair to the candidate, affording him the opportunity of showing his greater competency in other subjects, in which case the Board of Examiners may, if they think proper, consider whether this may not justify them in passing him.

As a matter of fact, I believe that the occasion for this exercise of clemency does not arise, for it is commonly found that the candidate is also weak in other subjects.

Major Examination.—87 candidates were examined in 1887 for the Major qualification, 59 of whom passed, and 28, or 32 18 per cent., were rejected. Of these last 11 failed to earn the aggregate number of marks upon the whole examination; 5 were rejected either in the practical work or *viva-voce* examination in chemistry; and 1 each in materia medica and botany.

Modified Examination.—Only 3 candidates were examined in this department during the year, 2 of whom failed and 1 passed.

The Board of Examiners held 31 meetings for conducting the technical examinations during the year, at 12 of which I was present.

The examinations were conducted with care and good judgment, and the successful candidates were, in my opinion, quite fit to be registered under the provisions of the Pharmacy Acts.

(Signed) E. Headlam Greenhow.

In Committee

the Council considered certain correspondence, the nature of which was not made public. Following this, the President referred to the

Death of Dr. Porter Smith,

who was an honorary member of the Society. In moving a vote of condolence with Dr. Smith's family, the President said that Dr. Smith's death was due to over-zeal in carrying out original work.

The Concluding Business,

which we understand had reference to the Pharmacy Acts Amendment Bill and other legal matters, was considered with closed doors, and the result of the Council's deliberations thereon was not made public.

A Taste for Whisky.—At the Marlborough Police Court last week Peter Laurie Smellie, Penton Place, Clerkenwell, an advertising canvasser and proprietor of a "Brompton Cure" patent-medicine, was charged with conspiracy to defraud. From the evidence it appears that Smellie has been in the habit of sending letters to whisky manufacturers in Scotland, purporting to be from Messrs. Albert Hodge & Co., surgical instrument makers, of Oxford Street, asking them to send quotations of whisky for the "profession." Orders generally followed this request; these were executed, but payment had not been made. Prisoner was known to have been connected with Hodge, who was recently convicted of fraud at the Middlesex Sessions, and sentenced to eight years' penal servitude. At prisoner's lodgings in Penton Place a detective found in a book a draft testimonial in favour of a patent medicine for asthma. The testimonial was in the prisoner's writing, and was signed "W. Harding, Faraday Road, North Kensington," and it stated that he had suffered from asthma for twenty years, and had swallowed as much medicine as would float a man-of-war, but found no relief until he had tried the "Brompton Cure." This cure was made by Smellie himself. The accused was committed for trial to the Central Criminal Court.

Poisoning Cases.—The Rev. John Lloyd Jones, M.A., of Thorpe Hamlet, near Norwich, committed suicide at Aberdayron on Saturday. Having purchased half an ounce of strychnine from a chemist for the purpose of killing magpies, he went into the Victoria Hotel, called for a glass of beer, put in the poison, and drank it. He died in twenty minutes.—On Wednesday, the City of London coroner held an inquest on the body of an old man of 70, who was proved to have died from the results of a draught of carbolic acid, self-administered.—Emma King, a laundress, aged 43, residing at Upper Holloway, suffering from internal pains arising apparently from indigestion, sent for a bottle of chlorodyne and took an ounce of it. At the inquest, held on March 29 Dr. Wynn Westcott, deputy coroner, remarked that, although chlorodyne contained several violent poisons, as a patent medicine no restrictions were placed upon its sale. Government derived a large revenue from patent medicines, and so, he supposed, people must incur the risk of being occasionally poisoned by them. It transpired that the woman had been in the habit of taking chlorodyne.—A child, aged 3, son of Mr. M. Wright, accountant, Leeds, found a packet of vermin-killer lying about, tasted some, and died. The powder was a compound of strychnine.—A man named Horrocks, employed at the Albert Inn, Bolton, was cleaning the bar fixtures with ammonia, and had another fluid by his side in a vessel similar to that which held the ammonia for refreshment purposes. In mistake he drank from the ammonia bottle, and is believed to have swallowed about a quarter of a pint. The man was taken to the infirmary, and is now recovering.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

A MEETING of this Association was held on March 29, at 103 Great Russell Street, W.C., at 9 P.M. Mr. T. S. Dymond presided, and there was an unusually small attendance.

The evening was devoted to the reading and discussion of a number of short papers, the first of which were contributed by Mr. J. F. Burnet, of Oxford. In one note on **sugar as an alkaloidal reagent** Mr. Burnet called attention to certain hitherto unobserved reactions which alkaloids exhibit when treated with sulphuric acid in presence of sugar. Thus codeine, morphine, and veratrine gave red shades of colour when so treated, while foreign aconitine gave an orange colour which gradually darkened to a greenish shade. English aconitine gave nothing distinctive, however, and all other official alkaloids were tested with negative results. Another note by Mr. Burnet was on the use of mucilage for **suspending bismuth salts in mixtures.** He found that both acacia and tragacanth mucilages appeared after a short time to stick to the bismuth, forming a gluey mass at the bottom of the bottle which would not diffuse on shaking. He therefore condemned the use of mucilage along with bismuth, and spoke in favour of glycerine when an addition is necessary. In the discussion on this note it was pointed out that compound tragacanth powder has not the same objection, and that when another solid, such as carbonate of magnesia is used along with the bismuth, mucilage is admissible. A few notes on a case of **laburnum-poisoning** followed, and then some suggestive ideas on the use of chloroform as a preservative. For fresh infusions he had found a little chloroform admirable, and hypodermic solutions of alkaloids kept well when made with chloroform water. Dispensing solutions such as acetate of potash, the scale preparations, quinine, and others kept well by the addition of a small percentage of spirit of chloroform. Mr. Burnet's contribution also included a note on the purity of **artificial salicylic acid,** in which he showed that commercial acids of that nature, including the dialysed acid, reduce permanganate of potash sooner than the natural acid, and otherwise show evidence of minute traces of impurity. After these notes were fully discussed, Mr. C. P. Strother read a note on the **immediate cure of hiccough.** After tracing the origin of the disorder he said that, although it was rarely fatal in this country, in others, especially those countries where yellow fever raged, it was taken as a sign of approaching death when a person suffering from that fever was seized with hiccough. As the disorder is due to an abnormal closing of the glottis by the epiglottis and a slight spasmodic contraction of the walls of the thorax, it occurred to a physician about twenty years ago that it could be cured by mechanical means, and he found that if the patient pressed a finger into the orifice of each ear, simultaneously swallowing a mouthful of water, the glottis was opened, and the hiccough immediately stopped. In demonstrating the method, Mr. Strother explained that it is well to keep the chin well up; and, as chemists are often called upon for a cure for hiccough, they should add a drachm of tr. cardam. co. to the water which they administer. It is, of course, necessary that a second party should hold the glass of water to the patient's mouth. Mr. Strother had never known this method to fail in curing the most obstinate case of hiccough. Mr. E. J. Millard followed with a note on **unfermented wines,** in which he recorded the result of the examination of three samples, one of which contained 4 per cent. of proof spirit, and the others salicylic acid as preservatives. In a note on the **microscopic examination** of drugs and chemicals, Mr. Ashley Rogers made out a case for the more common employment of the microscope as a pharmaceutical requisite; and, in commenting on the paper, the chairman said that he understood that it is intended to add practical work with the microscope to the pharmaceutical examinations. The last note read was on **Turpentine Liniment** by Mr. Crisp, who showed a number of samples, and contended that there is no difficulty in making a semi-gelatinous and whitish liniment by following the Pharmacopœia to the letter. Mr. Peter MacEwan then made some remarks on the **gelatinisation of a mixture containing quinine,** perchloride of iron solution, spirit of chloroform and water, taking this as the basis of remarks on other examples of gelatinisation. Although the attendance was exceptionally small, the discussions on the various subjects were taken part in by each member present, and they were of a lively character.

At this week's meeting, held on Thursday evening, there was a large attendance, and the principal business was a paper by Mr. W. A. H. Naylor, F.C.S., honorary secretary of the British Pharmaceutical Conference, on

PHARMACY: SOME OF ITS MODERN DEVELOPMENTS.

The first development which the author noticed was in those pharmaceutical operations in which evaporation is used. **Evaporation** cannot be said to be at all modern, since it was one of the earliest means employed for obtaining galenical preparations in a condition suitable for administration. There are several ways of evaporating galenical preparations: First, evaporation by means of a water-bath, which gives, roughly, a temperature of about 140° F.; also this means combined with exposure of the subsequently-obtained extract to a current of hot air; second, evaporation in steam-jacketed open pans; and, thirdly, evaporation *in vacuo*. Owing to the high temperature of steam-jacketed pans they are the least suitable of all for evaporation, because the temperature is sufficiently high to endanger the existence of delicate therapeutic principles, while it ensures the evaporation along with the steam of aromatic and volatile principles. But this method of evaporation has several advantages, viz. reduced volume rapidly, renders mucilaginous and pectinous substances insoluble, and so removes from solution bodies which interfere with the keeping properties of the preparation. Evaporation on a water-bath is, so far as aqueous preparations are concerned, much too slow for ordinary purposes, and has the greater disadvantage of exposing the preparation to the air for a prolonged period, whereby change in the nature of the product is brought about. Evaporation *in vacuo* therefore, remains the most suitable means for effecting the concentration of certain medicines. As far back as 184- Professor Redwood described this as the most economical and the most satisfactory means of evaporation. Commenting upon this opinion Mr. Naylor remarked that, although it was generally accepted in these early days of modern pharmacy, it was not universally carried out in practice, because the manufacture of galenical preparations was to a large extent retained by the retail pharmacist, whose modest requirements did not permit the comparatively large outlay required to put the principle into practice. Still it was carried out to some extent, and now that the aspect of pharmacy is changing, there is a growing disposition to conduct most evaporations *in vacuo*. Mr. Naylor pointed out the advantages which vacuum-pans have over other means of evaporation, more especially the excellent qualities of the evaporated products, which are generally of a better appearance, more soluble, and more akin to the raw drugs in taste. He thought that there was still work in this department for research. The juice of belladonna, for example, might be taken, divided into two portions, one of which should be evaporated in an open pan and another *in vacuo*, the products being examined for their alkaloidal strength. He then proceeded to express a few thoughts on **standardisation.** So far the principle upon which we have gone in this modern development is to determine the quantity of the principal chemical constituent in a preparation, this constituent being generally regarded as that to which the therapeutic activity is due. It may be that this is too narrow a principle to act upon, but, on the whole, it is a convenient one. The great majority of drugs are, however, unsuitable for standardisation because of our lack of knowledge of their composition, and the complex character of others. Meanwhile, therefore, it is likely that we shall have to confine standardising to a few potent drugs whose active principles may be easily isolated. It has been said that that being the case, if the principle can be isolated, why not use them themselves? But the therapeutists reply that they are not certain that the whole properties of a drug reside in these principles. That being so, we need only take the proportion of the active principle as a convenient means for regulating the strength of the preparations, the probability being that the other constituents bear a tolerably constant relation to the principle fixed upon

Mr. Naylor considered that on the whole the Pharmacopœia authorities have selected wisely those cases in which they direct standardisation, but he suggested that the extract of nux vomica should be evaporated to dryness, and the weight made up with milk-sugar, also that the tincture of nux vomica should be made direct from the seed and standardised, whereby a tincture of more uniform colour is obtained. Amongst preparations which he thought should be standardised were vinum ipecacuanhæ, and the extracts and tinctures of aconite and belladonna. Speaking of the directions in which standardising is not advisable he quoted the case of digitalis, regarding which we have little definite knowledge as to what have been assumed to be its proximate principles, and which of them are medicinally active. Altogether, in his opinion the complex constitution of this drug, our imperfect knowledge of its educts and their chemistry, physiology, and therapeutics, justified him in saying that it is not amenable to standardisation. Mr. Naylor then proceeded to speak of the introduction of fluid extracts into pharmacy Regarding them as preparations made by treating crude drugs with solvents which by experiment have been found to exhaust the drugs of their active constituents, the question arises, Why not dilute such extracts or essences with suitable menstrua in order to make tinctures, infusions, or syrups? To this Mr. Naylor gave a Scotch answer—Are we sure, he said, that the tincture and infusion of a drug are the same therapeutically? Is it not the case that we have been accustomed to regard them as products of unequal selection? Nevertheless he was sure that the art of pharmacy would be greatly simplified if by experiments we were able to demonstrate that infusions and tinctures are similar in composition. He then proceeded to speak of concentrated waters and liquors for chemical syrups as modern developments of pharmacy, saying of the latter that, provided they are of full strength and stable, no reasonable objection can be urged against their use. In the concluding sentences Mr. Naylor referred to the growing practice of coating pills, and said that there is no doubt that some means for rendering pills absolutely tasteless has long been demanded by the public, and had been well satisfied in the gelatine and pearl coatings.

In the discussion which followed, Mr. Bird advocated the American plan of evaporation, in which a roller towel suspended over the evaporation-pan attracts and absorbs the vaporised liquid. He had met with an extract of nux vomica, apparently made *in vacuo*, which was very pale in colour, while commercial samples are generally dark brown. Mr. Williams thought that more work should be done by physiologists in examining galenical preparations before standardisation is further proceeded with. Mr. Ellwood expressed views in opposition to this, and made some interesting remarks on the amount of extractive matter in tinctures and extracts, which he had found to vary considerably, but not so if made from the same drug. He had found in the case of alkaloidal preparations that the amount of active principle bore a fairly definite relation to the amount of extractive matter. He approved of chemical concentrated liquors for making syrups, but had not the same opinion of others. Mr. Phillip advocated a resinous coating for pills. Mr. Naylor then replied, and mentioned that extracts made by the American plan of evaporation were not completely soluble in cold water, whereas those prepared *in vacuo* are. He had found that the latter have also the aroma most marked, so much so, indeed, in the case of conium as to be objectionable. Replying to the remarks on standardisation, he reminded the meeting that empiricism is still rampant in medicine, and must be satisfied. Moreover, the number of drugs which contain active principles, definite as to their chemical constitution and physiological action, is very small, so that there must be a limit. A vote of thanks was heartily accorded to Mr. Naylor.

Pollen is more tenacious of its fertility than is generally supposed. Nature has provided it with various protective influences, and it can stand a temperature of 90° C. without injury, while a temperature of 32° C. accelerates growth. On the other hand certain chemical reagents act upon it very distinctly, the plasma of the pollen-cell being peculiarly sensitive to antiseptics. Chloroform, bromine, and ammonia vapours are fatal to the life of the pollen. If Sir Morell Mackenzie's theory of hay fever is right, we have here a suggestion for the treatment of the malady.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

Herbalist Candidates.—The usual examination of candidates for the diploma of herbalist will be held on April 9, at the Paris College of Pharmacy. The preliminary written examination will take place in the library early enough not to interfere with the regular reading hours. As usual, there are more female than male candidates.

Ether Explosion.—A workman in the employment of M. Capron, dealer in chemicals, No. 68 Rue François, Miron, while bottling ether near a lighted stove, caused the explosion and fire that seldom fail to occur under such circumstances. The front window was blown out, and considerable material damage done by the fire, but no serious injury to persons.

M. Peytral, the new Minister of Finances, was a pharmacist and druggist at Marseilles until 1881, when he was elected to the Chamber of Deputies. At one time, when President Carnot was Minister of Finances, M. Peytral was his Under-Secretary of State. Paul-Louis Peytral was born at Marseilles in January, 1842. Socially he is said to be affable; politically he is not very extreme, considering the last choice of Marseilles electors for the deputation.

A Right Whale near Algiers.—The museum has been able to complete its splendid collection of whales. A balæna, of the variety *Biscayensis*, was caught last January near Algiers, and there exhibited for a while. But before the museum people could secure the specimen it was, for sanitary reasons, ordered to be cut to pieces and cast into the sea. Nevertheless, M. Pénissat has been able to fish out and recover every particle of the cetacean bones, and to forward them to Paris, where a vacant place had long been waiting for such a specimen.

A Careless Administration.—There appears to be some dissatisfaction with the management of the London hospitals. A similar feeling prevails here, complaints more or less justified being frequently heard against the Paris Assistance Publique. The other day, in the Rue Crois-des-Petits-Champs, a crowded thoroughfare, one of the *brancards* (hand-barrows), in which patients are carried to hospitals, broke down, and the occupant, a woman in the acute stage of typhoid fever, was abruptly landed on the side-walk, and had to be taken to the shelter of a coach-door until another *brancard* could be procured. As the same accident happened, not long since, with one of the victims of the Boule-Rouge tragedy, loud indignation is manifested, and the Assistance Publique is sharply reminded that it should meddle less with politics and pay more attention to the hospitals under its care.

Death of M. Jules-Emile Planchon.—Professor Planchon, the brother of the Director of the Paris School of Pharmacy, died almost suddenly last Monday, at Montpellier. He was born at Ganges (Hérault) in March, 1823, and studied first at Montpellier, devoting himself especially to botany and natural sciences. Having obtained in 1844 the degree of Doctor of Sciences, he went to England to perfect himself, and had from 1844 to 1849 charge of the Kew Botanical Gardens herbarium. Thence he was successively a professor at the Ghent Institut Horticole (1849-51), the Nancy School of Medicine and Pharmacy (1851-53), and finally the Montpellier College of Pharmacy, of which he was the director till within a few years. At one time (1873) he was sent on a Government mission to America to study phylloxera. A corresponding member of the Academy of Sciences, Academy of Medicine, and of many British and American societies, he was at his death the Director of the Montpellier Jardin des Plantes. As a botanist, M. Emile Planchon's name is well known everywhere, and his works and papers were many and important. Personally he was not much known here, but he is said to have had his share of the family's natural amenity and kindness.

Ptomaines from Cuttle-fish.—When the discovery was first announced that animal matter, on naturally decomposing, will give rise to the formation of alkaloids, toxicologists were, for a moment, struck with consternation. But they recovered their equanimity, in measure, as the cadaveric alkaloids became better known, and easier to distinguish from

orthodox poisons. M. Oechsner de Coninck, of the Paris Faculty of Sciences, in order to better investigate ptomaines, has prepared them in large quantities from the flesh of the cuttle-fish, so abundant in the Mediterranean. For this purpose 41 dozen polyps, well washed, and their sepia-sacs having been emptied, were left to spontaneously decompose on the Thau pond, near Cette. The mass was examined at various periods, the alkaloids being extracted according to the Gautier method. The first obtained were easily identified with ptomaines already known, and, therefore, received no particular notice in the preliminary memoir on the subject presented by M. de Coninck to the Academy of Sciences. But the fish, in a more advanced stage, afforded two new ptomaines with peculiar properties, which are now the object of the professor's investigations. The chemical reactions of the chlorides, bromides, chloro-platinates, and chloro-aurates of the new bases, however, are of interest to specialists only. The pharmacist will probably be satisfied to know that cuttle-fish, besides producing sepia and the familiar bone, can also raise ptomaines of some distinction in chemistry.

Explosion in an Oxygen Works.—Last Friday the daily papers related an accident which had occurred the previous night in MM. Brin frères' oxygen works at Passy, Paris. But the particulars were so unsatisfactory in a chemical point of view—an oxygen explosion is always of deep concern to chemists—that it was decided the best way to know the truth was to visit the scene of the accident, 7 Rue Gavarni. Fortunately, access was easily gained to Mr. C. W. James, the engineer of the works, who very courteously supplied all the technical details naturally lacking in the daily papers. To begin with, the explosion was not a chemical one, but purely mechanical. The manufacturing process patented by the MM. Brin is, to a certain extent, derived from Boussingault's method, namely, the successive oxidation and deoxidation of baryta when heated in a current of air at different temperatures, binoxide of barium being thus first obtained, is next reduced to protoxide by an increased temperature, and so on *ad infinitum*. As the process necessitates no chlorates, and no other pressure than is required to insure circulation of air and the filling of a gas-holder, no explosion could take place during the chemical manipulation. But the gas being delivered to customers both in syphons and dry under pressure in metallic cylinders, some has to be forced into an accumulator and kept for use. The receiver employed during the night of Thursday was a strong horizontal steel cylinder, some 10 or 15 feet long and 3 wide. Emile Devilliard, who was in charge at the time, was a young man about twenty, just graduated from the Angers Ecole Centrale. When the gauge indicated fifteen atmospheres (225 lbs. to the square inch) in the accumulator, the fireman asked if it was not time to stop. 'Oh, no,' replied Devilliard, 'to-morrow is a holiday; we may lay in some more stock.' But suddenly the head of the cylinder blew off with deafening noise, and was projected a hundred feet away through the roof and tree branches. At the same time the cylinder in its recoil crushed the young man against a brick wall and literally flattened his body out of shape. A night watchman was also hit with some of the flying *débris*, but his injuries are reported slight. The material damage is considerable. On Easter Monday—a hard day to get men to work—roofers and carpenters were busy repairing the evil, and it was expected the works would resume operations in a few days. In the meantime a notice posted at the door announced that, thanks to their branch house (69 Horseferry Road, Westminster) all orders will be executed as punctually as usual.

THE PARIS SOCIETY OF PHARMACY.

At the regular monthly meeting, held on April 4, the announcement was made of the death of M. Jules-Emile Planchon, the brother of the Director of the School of Pharmacy and perpetual secretary of the Pharmaceutical Society. A vote of condolence with the absent officer was unanimously passed by the meeting.

M. Bouchardat related his further investigations of *terpinol*, prefacing his remarks with the observation that when using this term he always means the real chemical compound spoken of by Liszt, and not the more or less abominable commercial concoctions which are but too familiar to most pharmacists. As he explained before, the raw product consists of about five-sixths of its weight of crystalline substance with a hyacinth smell, while another portion has a different boiling point, and a smell somewhat minty or peppery. To the latter he gave for convenience sake the provisional name of *terpol*, and he is convinced that compound is identical with the cajeputol found in oil of cajeput, the eucalyptol of oil of eucalyptus, cymol of worm-seed oil, and others of the same sort. The process employed for separating and purifying terpol is long and tedious, but is not of sufficient pharmaceutical interest to require more extended notice of a preliminary essay which further investigations will possibly modify.

M. Léger read the first part of a work by M. Gascard, *interne* pharmacist, on the "Wax found in Shellac." The substance has long been noticed and alluded to, but M. Gascard was fortunate enough to obtain about 500 grammes for the purpose of examination. So far he has dealt with the portion of the waxy product which is insoluble in alcohol, constituting some 12 per cent. of the whole. For chemical reasons detailed at length he thinks the substance is a alcohol.

Leaving the realms of theoretical chemistry, M. Vigier brought the audience down to the solid ground of practical pharmacy by speaking of "Wine of Gentian." The preparation is one frequently prescribed for dispensary patients, and when made by maceration with red wine and gentian root as it should be, is apt to be muddy. Now a muddy preparation, everyone knows, is an eyesore to a pharmacist, the more so that dispensary patients are very hard to please. Give a man coming with his money something that is not quite clear as it might be, he will accept it as a matter of course without saying a word. But let the same man come with a dispensary order entitling him to free medicines, and you will notice how mistrustful and hard to please he will be. come. It will not do to then dispense anything at all cloudy. Well, of all methods for clearing gentian wine M. Vigier has found none better or quicker than the addition of about 1 per mille of carbonate of magnesia, followed by shaking and immediate filtration. He was not sure what caused the cloudiness, or what reaction occurred in the clearing, but he knew it succeeded perfectly.

M. Crinon thought the muddiness might be owing to some fatty or resinous matter in the gentian root, which would explain the action of magnesia. M. Portes, a good authority on wine, said he had no doubt the precipitate was due to combination of the vegetable albumen of the gentian with the red colouring-matter of the wine. He had had some experience on such subjects, and advised the addition of some tannin, which will separate the albumen at once. Magnesia, for several reasons, was objectionable.

Before adjourning the society elected M. Héral a resident member. Four candidates had presented their claims to the vacant seat, now thus awarded.

GERMAN PHARMACEUTICAL NEWS.

(From our Berlin Correspondent.)

Another Antipyretic.—I trust you will not be too greatly dismayed with the news that yet another synthetic organic compound claims attention. It seems not unlikely that in the near future every German physician will have his own antipyretic. The name of this new product is formidable enough, necessitating the use of thirty-three letters, as follows:— Methyltrihydroxychinolinecarbonic acid. Professor Demme has published some interesting particulars of this compound in the *Therapeut. Monatscheft*, from which it appears that it is prepared from ortho-oxychinolinecarbonic acid by treating this latter in acid solution with nascent hydrogen. It is an additive product, the hydrogen being directly added to the molecule, tetrahydroxychinolin carbonic acid resulting:—

$$C_9H_7NO_3 + H_4 = C_{10}H_{11}NO_3.$$

The hydro-acid is treated with methyl iodide, the hydriodate of methyltrihydroxychinolinecarbonic acid being formed as follows:—

$$C_{10}H_{11}NO_3 + CH_3I = C_{10}H_{10}(CH_3)NO_3HI.$$

By the addition of 10 gramme of dry sodium carbonate to

every 3·66 grammes of the acid in warm solution, the sodium salt is produced of a dark-brown colour, the dry compound being pale yellow. The free acid itself is only soluble in water with difficulty. A point of special importance is the similarity of this new body to thallin (tetrahydroxymethylchinoline) as regards constitution. This relation of molecular structure led to the inference of its probable identity or resemblance in therapeutical properties. Whether the compound will acquire favour cannot yet be decided, physiological and clinical data being insufficient. Professor Demme's experiments, though not concluded, seem to indicate some antifebrile effects, as also a power of increasing the blood pressure and strength of the pulse. The lowering influence upon the temperature was produced later and more slowly than with antipyrin. It was administered in doses of 0·1 gramme to children of from 4 to 6 years, and of 0·25 gramme (4 grains) to those aged from 11 to 15 years.

New Pharmacies.—Eleven new pharmaceutical licences have been granted in Berlin, equivalent to so many presents of about 5,000*l.* each. This city has now, therefore, 110 "apotheken," besides the Royal Dispensary and nine hospital dispensaries. The latter differ somewhat from the similarly named institutions in England, as out-patients obtaining medical advice and medicines from the hospitals are exceptional. The new licences, by the provisions of a recent law, may not be sold until after at least ten years' holding.

Phenacetin.—A recently-introduced antipyretic, which seems to be possessed of useful properties, is phenacetin. Recommended, in the first instance, by Hinsberg and Kast, and later by Professor v. Bamberger, it is now highly spoken of by Dr. Heusner, who publishes records of a number of cases treated therewith in the *Therap. Monatssch.* From these it appears that 15 grains of phenacetin are therapeutically equivalent to 8 of acetanilide and 30 of antipyrin, while 22 grains of quinine were less effectual in lowering temperature. It is particularly valuable as a nervine and pain-killer, in doses of from 5 to 8 grains once or twice daily, given preferably in a little brandy, owing to its insolubility in water.

Obituary.

Jackson.—On February 8, at his residence, Prahran, near Melbourne, Mr. John Jackson, for many years the manager of the chemical laboratory in the firm of Felton, Grimwade & Co., Melbourne. Aged 68. Mr. Jackson was in business at Morley, Leeds, England, for a period of twenty years, but left this country for Australia in 1864, and was almost immediately engaged by the firm in whose service he remained to the end.

Lindsay.—On January 26, at Albury, Australia, Mr. D. B. Lindsay, of the firm of D. B. Lindsay & Co., chemists, of that place. Aged 44. Mr. Lindsay served his apprenticeship with Messrs. Duncan, Flockhart & Co., of Edinburgh, and soon after completing his term went to India, where he made a great success by supplying drugs to the English troops. He had established his Australian business about two years ago.

Macintosh.—At 5 Tarvit Street, Edinburgh, on March 29, Mr. John Macintosh, chemist and druggist. Aged 25. Mr. Macintosh was an assistant in the West-end pharmacy of Messrs. Duncan, Flockhart & Co. for a number of years, and lately started business on his own account in the Morningside district. He was a quiet, earnest young man, and though his death was not unexpected, it is much deplored by his many friends.

Pennington.—On March 24, at Worksop, Mr. James Edward Pennington, son of the late Mr. J. R. Pennington, chemist and druggist, Worksop. Aged 19.

Rough.—At 5 Osborne Terrace, Edinburgh, suddenly, on March 27, Mr. Robert Rough, chemical manufacturer, Broxburn. Aged 64.

Smith.—At Shepton Mallet, on March 29, Dr. Frederick Porter Smith, the celebrated pharmacognocist. The deceased gentleman—who met his death at his own hand, having, during a fit of temporary insanity, induced by overwork, swallowed a poisonous dose of prussic acid—studied medicine at King's College, London, and graduated as M.B. of the London University in 1855, becoming in the same year M.R.C.S. and L.S.A. During his student days he showed great proficiency in the study of botany and materia medica, and when he became attached to the Chinese Medical Mission, the knowledge thus acquired specially fitted him for the study of Chinese materia medica, upon which he, in 1871, published a valuable book entitled "Contributions towards the Materia Medica and Natural History of China." This work, together with several monographs on special subjects, secured Dr. Smith's recognition as an investigator, and in 1874 the Pharmaceutical Society elected him an honorary member. Dr. Smith was also a Fellow of the Royal Geographical Society. He was the founder of the Hankow Hospital, Central China, but latterly has acted as medical officer of health at Shepton Mallet.

Personalities.

Mr. J. J. Petrie, Aboyne, N.B., asks us to contradict the statement that he has bought a business in Aberchirder, which was published in this journal on March 24.

Mr. W. Sharman, of 247 Mare Street, Hackney, has purchased the business recently carried on by Mr. Lear at 86 Amhurst Road, which he will carry on as a branch establishment.

Sir Morell Mackenzie.—The subjoined portrait of this eminent specialist, whose name has come so prominently before the public during the past few months, is copied



from a recent photograph by Fradelle & Young, of Regent Street.

On Sunday next (April 8) the 70th birthday of Professor Aug. Wilhelm Hoffmann is to be celebrated at Berlin. The Committee of the Chemical Society of Berlin has opened a subscription, and proposes to have a bust of the eminent professor executed, and to devote the surplus funds to endow an annual essay on some subject which Dr. Hoffmann will be asked to indicate.

The Sale of Food and Drugs Act.—Dr. William Robert Smith has been appointed public analyst for the city of St. Albans, at 15*l.* per annum, *vice* Saunders, resigned; Dr. William L. Emmerson has been re-appointed public analyst for the borough of Stamford; Mr. William Johnstone has been appointed public analyst for the borough of Dunstable, at 10*s.* 6*d.* per analysis.

FAILURES AND BANKRUPTCY REPORTS.

Re J. H. PAYNE, Thrapston, Northampton, Chemist and Sauce Manufacturer.

ON Monday the first meeting was held before the Official Receiver for Northampton at the London Bankruptcy Court under this failure. The receiving order was made on February 21 on the debtor's petition. The accounts filed show debts unsecured 519*l.* 12*s.* 11*d.*, and assets 127*l.* 8*s.* 8*d.* The debtor states that he commenced business at Thrapston as a chemist in May, 1884, with 120*l.* capital borrowed from his wife; that in May, 1873, he presented a petition in the London Bankruptcy Court, and obtained his discharge, but could not state what dividend had been paid; that he executed a deed of assignment in February, 1887, and attributes his failure to losses incurred in patenting a solidified sauce and placing the same on the market. He explains his deficiency thereby to expenses of living and depreciation in the value of the stock. The proofs having been gone through, the chairman stated that the stock-in-trade and effects at Thrapston had been sold by valuation for 90*l.*, and that a sum of 11*l.* had been received from the sale of drugs. The furniture had not been disposed of, as it had been claimed by the wife under a will. He had been promised an inspection of the will, but had not yet seen it. He should like to know whether any creditors had any question to ask upon which he could obtain some information to examine upon at the public examination. In reply to Mr. Barclay (Barclay & Son), the bankrupt said it was not true that he had neglected his business in bringing out the patent sauce, nor had he expended his creditors' money in that direction. A friend of his had invented the sauce and provisionally protected it, and had given it to him upon the understanding that he worked it. There was no value in the sauce business at the present moment because the provisional order had expired. He was not aware what the provisional order cost; he should think about 10*l.* The Chairman (to Mr. Barclay): Would you like to buy it? Mr. Barclay: No, sir, certainly not. I cannot help thinking that our money has gone in working this sauce. The debtor said that was not so; but for a private matter he should not have failed at all. His business was a very good one. The Chairman: I do not know whether there is any value in the title at all; but a large quantity of the stuff has been sent out to all parts of the world, and we cannot get payment for it. Mr. Barclay: That leads me to say that but for this sauce the debtor should not have failed at all. The debtor said that his deficiency was under 400*l.* The Chairman: Furniture to the amount of 11*l.* is not claimed by his wife; about 50*l.* or 60*l.* worth is; we have received about 100*l.* of the book debts that are good. You are sure you would not like to buy this sauce? Mr. Barclay: Quite sure, sir. The Chairman: It is in solidified tablets, and if you mix it with water you can have what sauce you like. Adjudication of bankruptcy has been made, and in the absence of any proposal the case will be wound up by myself. The proceedings then terminated. The following are the principal creditors:—

	£	*s.*	*d.*
Barron, Squire & Co., Bush Lane	46	0	0
Bowles & Cross, Lambeth	31	3	0
Barclay & Son, Farringdon Street	38	6	0
Knight, R., Oundle	12	10	0
Payne, Miss B., Thrapston	120	0	0
Parsons, Miss E., Ely	36	0	0
Richardson & Son, Oundle	31	10	0
Richardson, W., Executors of, Oundle	11	5	0
Smith, T., Fleet Street	45	4	0
Sharp Brothers, Southampton Row	16	0	0
Walker & Co., Bush Lane	40	0	0

Re WM. CLARKE ASTON, Tattenhall, Grocer and Druggist.

AT the Chester Bankruptcy Court on March 29, the above case was called. The bankrupt was publicly examined on March 8, and was now to attend with amended accounts for his adjourned public examination, but the Assistant Official Receiver (Mr. Hugh Roberts) intimated that he had been informed that the bankrupt had disappeared from home, and applied that the examination be adjourned *sine die*. No appearance being put in the application was granted.

Re W. J. BARNES, Atlas Chemical Works, Rainham, Essex, Chemical Manufacturer.

ON Wednesday the first meeting of creditors under this failure was held before Mr. Godfrey, Colchester, Official Receiver. The receiving order was made on the petition of Mr. Joseph Guedalla, Essex Street, Strand, solicitor, upon a bill for 150*l.* 17*s.*, and adjudication of bankruptcy has been made. The accounts show debts unsecured, 3,240*l.*; and no assets. Some discussion took place upon the proof of the petitioning creditor, which was upon an accommodation acceptance which the bankrupt alleged had never been negotiated; but it appeared that judgment was allowed to go by default, and the Official Receiver pointed out that as the County Court Judge had acted upon it he felt bound to admit it. Upon the proof of the father for 2,037*l.*, money advanced, Mr. Brighten said that every item could be vouched. He gave the bankrupt a clean slate in 1884, and 1,000*l.* to go on with; but he (Mr. Brighten) told him at the time that he would save money if he allowed him 500*l.* a year, and from what had transpired it was clear that that was so. The Official Receiver said it had cost him 800*l.* a year since 1884. In the absence of a quorum of creditors no resolution was passed, and the case was left with the Official Receiver. The following are the only creditors:—

	£	*s.*	*d.*
Barnes, W. C., Buckhurst Hill	2,037	0	0
Teats, John, Rood Lane	80	10	0

Liabilities on Accommodation Bills.

Union Bank of London	200	17	6
Read, E. J., Fleet Street	153	1	8
Guedalla, J., Essex Street	150	17	0
Marting, Verstraet & Co., Paris	537	13	10

These bills the bankrupt accepted for the accommodation of Mr. J. J. Wallace, and states that with the exception of 75*l.* he received no consideration for them.

Gazette.

PARTNERSHIPS DISSOLVED.

Dalton, H., & Co., Mincing Lane, East India, foreign, and colonial brokers.

Jones & Shannon, Liverpool, aërated water manufacturers; as far as regards W. F. Jones.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Iley, William Henry, Old Shildon and New Shildon, Durham, druggist and grocer.

Warner, George, New Road, Battersea Park Road, eclectic and botanic practitioner.

ADJUDICATION.

Avery, Alfred, trading as the Crayford Wine and Spirit Company, West Hill, Dartford, and Crayford, Kent, and mineral water manufacturer.

NOTICE OF DIVIDEND.

Macdonald, John, Walton-on-Thames, physician and surgeon—second and final div. of 3½*d.*, April 9, Official Receiver's office, 28 and 29 Southin's Lane, E.C.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Davidson, Henry, Barnsley, drysalter—conditional order.

APPLICATION FOR DEBTOR'S DISCHARGE.

The following amended notice is substituted for that published in the *London Gazette* of March 27:—

Hannan, Francis John, Woodstock, Oxfordshire, late of Worksop, Nottinghamshire, and Downton, Wiltshire, doctor of medicine—April 26, Oxford.

MR. BLANK'S PHARMACEUTICAL VIEWS.

And 'taint no more 'n's proper 'n' right in sech a sitooation,
To hint the course you think 'll be the savin' o' the nation;
To funk right out o' p'lit'cal strife aint thought to be the thing,
Withcut you deacon off the toon you want your folks should sing.

' there is any by-law more needed than another, it seems to us to be one requiring every candidate for the Phar- ceutical Council to issue some exposition of his views, oe programme of his intentions, whenever he asks for ction. We have nothing beyond the most moderate trust election promises. No candidate can foretell how he will under circumstances all of which cannot be known to n, nor say when it may be advisable to move towards an ject which he may always aim at. But for all that, we o are to be represented by him have a right to know ether he and we look at similar things similarly now. th all respect for his general honour, we prefer his written U to his mere verbal promise to pay; and we ought not be expected to take any man or his policy on trust. reover, such a by-law ought to be insisted upon, if only the sake of the education of the members of the Council emselves. Writing, as Lord Bacon said, maketh an exact n. At present we have no sort of guarantee that those ntlemen who serve us at Bloomsbury for twenty or five d twenty years in succession have any but the vaguest tions of the questions which interest or agitate the trade nerally. If each were compelled to write an essay on me of these subjects, he would for the first time in his life, rhaps, find it necessary to make actual acquaintance with e circumstances, and would at least show us how much or w little he might know concerning them, and how com- tent he may be for forming a judgment on them.

Of late years the members of the Society have indicated their votes a marked preference for candidates who pay em the ordinary respect of explaining by some means or her the purpose of their candidature, and we hope to see e time when this proceeding will be found to be an essential eliminary to election. The rejection of a few of those ntlemen who seem to assume a prescriptive right to rule without offering anything like a reason for their claim ould be a salutary means of encouraging the others.

Our attempt to develop the art of election-address writing means of one of our "post-card competitions" has been, e must admit, only moderately successful. Our replics ave not been half so numerous as when we asked for a harmaceutical parody on Shakespeare's Seven Ages, or when e asked for a model of a druggist's advertisement. Never- heless, we have nearly a hundred post-cards to choose from, nd from these we expect to be able to extract some hints.

It need hardly be said that not many of our competitors re satisfied with things as they are; if they were, there ould be but little occasion for a contest. We make the ouncil a present of the possible argument that if 100 have aken the trouble to criticise them unfavourably, these are ot one per cent. of the whole body of chemists, and that he balance may be presumed to be fairly contented. But ven the loyallest adorer of the Council will hardly be able o digest such a theory. It will be seen, however, that mong our writers a few are found to endorse the policy of he Council.

The limits of a post-card, of course, preclude the possi- ility of lengthy criticism or exposition. This circumstance as to be taken into account, and the matter on each has to e regarded principally as a sample of the style to be ollowed if space and time were of no object. In the ollowing extracts from our budget we give an idea of pharmaceutical opinion as indicated by this competition. We omit in many cases the exordium and the conclusion.

GENTLEMEN,—I am a candidate for a seat on the Pharmaceutical Council, and solicit your vote and interest. My views are simple and practical, and consist in making the Council of the greatest benefit to the greatest number, which does not seem to be the case at present. Whilst maintaining the educational work of the Council, I consider much more should be done to help the trade at large—1. By vigorously investigating and prosecuting all cases of infringement of the Pharmacy Act. 2. By promoting legislation in the direction of limiting the sale of poisonous products to qualified chemists. 3. By defending with the whole legal and scientific strength of the Society all cases of alleged adulteration where the issue is important to the trade generally. 4. By allowing members to consult the Society's solicitor on trade-mark, medicine-stamp, and other like matters. 5. By publishing in the Society's journal formulæ, manufacturing processes, &c., for chemical preparations, utilising the "Square" staff for purposes of investigation. 6. By making the journal of trade interest and repute.

In short, I wish to see the Council the commercial and scientific head of a commercial and scientific trade.

Yours faithfully,
H. W. BLANK.

GENTLEMEN,—I have been nominated to represent you on the Council, and after consideration have consented to place my services at your disposal.

My views in chief are these:—I recognise that the Society, although powerful, is but the able servant of British pharmacy. Its internal affairs and the maintenance of its general efficiency only derive importance from the fact that in it we possess a potent engine to protect and advance our interests. Therefore, although supporting it loyally, I shall only do so whilst to the advantage of our calling.

I am in favour of the Council's educational proposals, but believe that the time has now come for us to demand the full rights of our profession. I would ask Parliament, in the interest of the public and in English fairness to ourselves, to grant us the exclusive sale of true galenicals and poisons, and the dispensing of physicians' prescriptions. I would insist, in addition, that the owner of every pharmacy and the manager of every branch should be a registered chemist.

I am not afraid to demand protection thus openly, and I would accept no answer save that afforded by the division lists of both Houses. When the free-trade sun was at its zenith, we obtained limited protection. Assisted by stern energy and some state-craft, we cannot fare worse to-day. To this great enterprise, if elected, I shall dedicate my poor abilities and stalwart zeal.

Your faithful servant,
MIRABEAU BLANK.

GENTLEMEN,—I beg to offer myself a candidate for the Pharmaceutical Council. If elected I shall advocate the following:—An amendment of the Pharmacy Act whereby "stores" and limited liability companies will be brought under its provisions; also a clause to prevent the sale of poisons by unqualified persons under cover of the patent-medicine stamp. I shall vote for the inclusion of chemists in the Early Closing Bill now before Parliament, as I consider it will prove a boon to chemists generally to be relieved from their present self-imposed slavery. Untold good would result to the trade if the whole body of it was represented by the Pharmaceutical Society, instead of a small minority as at present; I shall, therefore, if elected, be prepared to propose a scheme whereby it will be to the advantage of every chemist to be enrolled under the banner of the Society. To this end I shall advocate a special council to be elected every year by the whole trade (in addition to the present educational council, but independent of it), to attend to purely trade matters. Whilst being careful to ensure that due regard is paid to educational matters, I shall bear in mind that it is equally important to protect and foster our trade, so that present members may flourish, and future members, after having toiled through their examinations,

may find that there is something tangible at the finish that has been worth the struggle.

T. C. E. Blank.

Gentlemen,—I seek election to the Pharmaceutical Council for the accomplishment of four reforms.

The Pharmacy Bill.

In giving my support to the Bill now before Parliament I would at once see that our legislators are instructed on the working of the existing Acts and the meaning of the present Bill—inducing them to insert a clause in the latter to stop the progress of the coach-and-four which is being driven through the former by corporate bodies.

Election and Constitution of Council.

I am of opinion that all registered chemists should have a voice in the election of the Council, and be themselves eligible for election.

The Research Laboratory.

I am opposed to the Research Laboratory, and would have the money proposed to be expended on it devoted to the support of trade interests. When our position becomes more assured a laboratory for research, in the absence of a better scheme, might exhaust surplus revenue.

Expenditure of the Society.

I would institute at the earliest date a thorough investigation into the expenditure of the Society, with the object of its readjustment. It is time that we shoud know how much of our money is squandered, and how little is properly expended.

Neither Withering Frowns

Nor "persuasive eloquence" will dissuade me from using every possible and legitimate effort to accomplish the above.

I am, gentlemen,

Your obedient servant,

J. Blank, per W. G. Blackham.

Gentlemen,—Amid the manifold and complex questions involved in pharmaceutical politics the would-be councilman is tossed upon a sea of troubles, liable to meet with storms of abuse and the contrary winds of adverse criticism, but his mainstay and sheet-anchor is education. To quote the charter, our Society was incorporated "for the purpose of advancing chemistry and pharmacy, and promoting a uniform system of education; also for the protection of those who carry on the business.' Now holding that education is the only protection we are likely to get in the present day, I approve of the efforts in that direction of your Council as constituting a sound policy, calculated to be ultimately for the advantage of pharmacy as a calling. Surely the action of a Society existing for all time, and therefore having to think and legislate for the future as well as the present, in adopting a progressive educational policy, even in advance of present needs, must be right in principle, however much difference of opinion there may be as to detail. Moreover, the pursuance of such a policy has the effect of producing a severance of the mere trading from the more professional part of our business, and though I fear the consummation of such an apotheosis for pharmacy as its entire separation from trade is hardly realisable, I believe that in proportion as it is we shall make progress, and that therefore, both individually and collectively, instead of the retrograde action of trying to carry on heterogeneous trades which can in no way be considered the business of a chemist and druggist, and which the laws of political economy must naturally take from us, we ought rather by advancing educationally to work upon higher levels, even though it be with a certain amount of individual and present sacrifice.

Yours faithfully,

Pro B. Blank, J. J. Chapman.

Ladies and Gentlemen,—I am a candidate for one of the vacant seats in the Pharmaceutical Council Chamber, and I ask for your votes upon the following grounds:—I desire, first, the popularisation of the Society; to see it in fact, co-extensive with the trade; and this I would endeavour to bring about by diverting the energies of the Society from illusory schemes of professional advancement, and directing them rather to the defence of the trade. The education of the pharmacist is already sufficiently provided for; what we now want is such a measure of legal protection as shall compensate us for the sacrifices we are, as pharmacists, compelled to make. For this, my second great desideratum, I look to the stricter enforcement of Clause 15 of the Pharmacy Act, 1868, and the enlargement of the poisons schedule—the true charter of our liberties, the one point at which the interests of the trade and the protection of the public evidently meet. These, then, are the objects for the attainment of which I shall (if elected for the Council) mainly strive; always keeping in mind the fact, too often lost sight of, that the Society exists for the sake of the trade, and not the trade for the sake of the Society.

I have the honour to be, Ladies and Gentlemen, your obedient servant,

Lobelia Blank

Gentlemen,—The Council of the Pharmaceutical Society, with a few worthy exceptions, has become unwilling, or incapable through interest or prejudice, of representing truly your needs and opinions. Should you elect me, I will become one of those exceptions, worthy, to the best of my ability, of the confidence I now crave. Two questions now press for immediate and decisive action—the question of personal qualification and the question of the financial state of the Society itself. It is, I think, plainly the first duty of the Council to cease from frittering away its time and money on any other object, however good in itself, and devote all its influence and wealth to the enforcement, by means of a new Act of Parliament, of the evident intention of the old, viz., the restriction of the business and title of chemist to the duly qualified chemist alone. That the Council has grossly neglected its opportunities, I believe; that it will continue to neglect them, I fear. Should I have the honour of being elected, I will never cease, in season and out of season, in my attempts to convert the present minority into a majority; to protest against any further expenditure as recently voted, and to insist upon a policy less academical and more practical, and therefore more in sympathy, I believe, with the wishes and interest of the vast majority of those whom I seek to represent.

W. L. L. Blank.

We are obliged to abbreviate, but it will be interesting to select characteristic passages from some of the other addresses received.

G. W. H. says:—"It is not my wish to make a name for myself, but to advance the well-being of my fellow pharmacists as far as lies in my power. I will give my views concisely. I am in favour of (1) reformation in the status of members, &c., the present associates in business to be coming members eligible for the Council; (2) that the research laboratory be used for pharmaceutical purposes only; (3) that the Pharmacy Bill, especially the new clause, be supported by the whole weight of the Society; (4) a change of president; (5) a more active intervention in trade matters."

"A Pharmaceutical Blank" says:—"In my opinion the Pharmaceutical Society ought to be an examining body only; consequently the present school of pharmacy at Bloomsbury Square should be abolished. I would support the dividing of the country into electoral districts, every qualified chemist and druggist being entitled to a vote, whether in business or not; the payment of members of Council a sum for expenses; the employing of the vast accumulation of funds of the Pharmaceutical Society in protecting and promoting the real interests of its members. I characterise the building scheme of the Council as reckless in its extravagance."

John Blank declares that our "rights and interests have been passively surrendered. The whole resultant is an amended Pharmacy Act, the miserable offspring of a yet more wretched parent." He would "boldly face the difficulty and go to Parliament for an entirely new Act," the provisions of which he proceeds to indicate. The object of them would be to give more monopoly to the qualified chemist.

bert Blank would "uphold the elevation of the chemist in moral, professional, and also in the social scale. I ad ate the closer bond of understanding between the do r and the chemist, yet with a bold line of distinction in th ollowing respect, viz., that the doctor shall prescribe an the chemist dispense medicines for poor suffering hu nity. If this is upheld with a determined union by ou rother chemists in co-operation with the doctors, I take it shall live to see the wretched supplementaries of our pr nt trade done away with, and work our calling into the id profession which the increased severity of our examina- tic seems to call for."

omas Blank has "often been astonished at the lassitude ar positive lack of business energy which characterises our Co cil, and at the supreme indifference—and I might almost sa ontempt—it displays towards trade comment and criti- ci , and have wondered at the marvellous faith and mis- ap ed conservatism which year after year returns the same lis ss representatives."

cording to J. Blank, "co-operative stores and limited co panies have made havoc of our rights without restraint. G ers, oilmen, drapers, *et hoc genus omne*, have pounced li harpies on the unprotected quarry, and a few polished b s is the remnant of pharmacy. The 'Society' supinely sl bers, and wakes only to fondle the curriculum baby. B her chemists, how long will you patiently tolerate this in sion of your rights? Rouse up, I implore you, from th lethargy, which is death! Sweep away, root and branch, th flaccid stumps which have cumbered the ground too lo ."

. J. says:—"Like timid schoolboys the Council sit s ering on the brink of a curriculum until my Lord Town Il opens the flood-gates and gives them a header. Is not t a well-merited rebuke? The trade asks for bread. We a offered the philosopher's stone. Legislation should in c case be centrifugal. The Council act on the centripetal s tem."

We are not quite sure whether W. Blank is serious when l announces that "if elected I would take an early oppor- t ity of bringing before the notice of the Council several n ded reforms in matters pertaining to our daily calling. tance the following: A certain preventative of fixed ppers, or a very ready means of releasing the same when fixed. The need of a superior kind of measure that would t drop from the lip after repeated use, with a clean and ady means of returning surplus liquid without running wn the measure side. I would also suggest an inquiry be ade into the cultivation of the best cork-bearing trees, so at we may have corks free from cracks and 'seed.' These d many other matters, such as a ready means of destroying e smell of paraffin in our pharmacies, &c, &c., &c., would ve my earnest attention."

Another John Blank, among other proposals, urges "that e Pharmaceutical Society should spend less money on the ornment of its home for the convenience of a few choice irits who are able to visit it, and more in order to protect d further the interest and prestige of the provincial emist."

The next J. Blank is more in harmony with the existing uncil. He says:—"My policy is to redeem our position chemists, and to form a substantial barricade against all qualified intruders. To enforce a curriculum which would oduce better educated members, shutting out those whose bilities unfit them for the sphere they rush into, and who wer the status and dignity of the trade."

J. M. also sympathises with the curriculum policy. He ould "support the passing of the Amended Pharmacy ct, as I believe that is a step in the right direction to raise he status of the chemist and druggist; but I will insist on clause being added making it illegal for firms or any cor- oration to keep open shop for dispensing poisons, &c., unless ach individual partner be qualified and on the register of hemist and druggists."

W. G., however, returns to the old tune. He writes:—"In he present unsettled state of pharmacy I am not in favour f a compulsory curriculum, and consider the Bill now before Parliament premature. I shall resist in every possible way any tendency to convert the office of President of the Society into that of Dictator."

Felix Blank is evidently in sympathy with the last writer. He declares his intention to "persistently endeavour to overthrow the tactics of the 'Napoleon of Pharmacy,' that factotum who has so rapidly gained, amid impotent opposition, supreme control as president, examiner, and bill-promoter."

Here is the programme set forth by another Felix Blank, which we may say fairly represents what a good many of our correspondents evidently regard as attainable:—(1) That the dispensing of medicines and sale of drugs by limited companies, the shareholders of which do not possess the necessary qualification, requires the immediate and earnest attention of the Council, and that steps be taken to prevent the continuance of this infringement of the spirit of the Pharmacy Acts. (2) I believe the clause in the present Bill relating to branch shops is only fair and equitable to master, assistant, and the public also. (3) The sale of the B.P. drugs, chemicals, and preparations, with a few ordinary exceptions, to be conducted solely by qualified men. (4) The dispensing of medicine for private patients by a chemist, except where the patient resides more than one mile from the nearest qualified dispenser. (5) A fixed scale of charges for the use of all chemists issued by a competent authority. (6) Some scheme by which the Minor man may be represented in the Council by associates in business, in order that their wishes and opinions may receive the attention and respect which they deserve. (7) Exemption of Minor men from jury service."

W. Blank would like "to arrange for a research laboratory where all contributors to the Society shall be able to work up to the standard of efficiency in pharmaceutical research, and to show enterprising foreigners that we are quite equal to them in zeal, and desirous of assisting the brother profession."

Among the addresses for which we cannot make room we may mention that several oppose the Early Closing Bill, a number want to do something in regard to patent-medicine stamps, and all who refer to the branch-shop clause express approval of it. One wants to purge the Council of its cockney predominance, another wants to give assistants an hour every day for recreation. One heads his address, "Blank for ever! Blank for ever! Blank at the Head of the Poll!"—a style which we fear would hardly be popular among his more dignified brethren, and would lose him many votes. Lastly, one drops into poetry, winding up a rather spirit-stirring appeal with these lines:—

> Still the chemists stand by and see
> Their professional trade in jeopardy.
> Behind the counter all day they stand,
> Yet in their welfare they lift not a hand.
> And now, ye chemists, wake up and rise,
> Before the trade disappears and dies.

In awarding the prize this month we do not regard it as our duty to select the card which offers what, in our opinion, may be the most desirable policy. We try rather to judge which would commend itself most to the electorate. The members of the Pharmaceutical Society are evidently not yet prepared to demand Mr. Carteighe's head on a charger, and, generally, are not inclined to rush into schemes of wild reform. The addresses which seem to us best calculated to win the favour of the members seem to us to be the first half-dozen which we have printed, and of these we decide that the first (signed H. W. Blank) and the second (signed Mirabeau Blank) divide the honours. To these, therefore, we award prizes, and shall send a guinea each to the authors, who are

MR. H. W. KEMP, Horncastle,

and

MR. J. E. SAUL, 143 New Bond Street, W.

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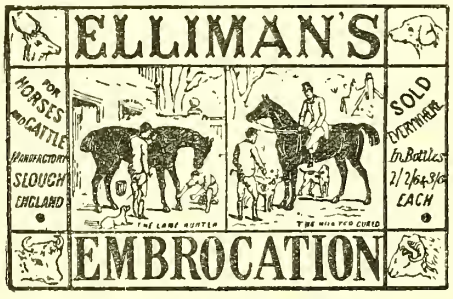
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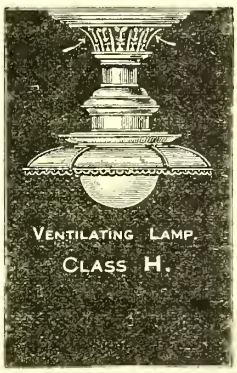
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EDITORIAL NOTES.

THE PHARMACEUTICAL COUNCIL

THERE were few matters of importance discussed at Wednesday's meeting of the Pharmaceutical Council. The nominations for the approaching election and the report of Dr. Greenhow on the work of the Board of Examiners for England and Wales during the past year were indeed the only matters of great public interest, and upon these there was no discussion. With characteristic disregard of the interest which the trade is now taking in the Pharmacy Acts Amendment Bill, the Council decided, according to custom, to take the Law and Parliamentary Committee's report *in camerâ*. We assume, therefore, that the Council maintains its *non possumus* attitude in regard to the branch shop clause of the Bill now before the House of Commons. Should that Bill be enacted, the Council will find itself in a curious position. Hitherto it has taken all the credit for the best which there is in the Pharmacy Acts, but it cannot now boast of lukewarmness even for the best in the Amendment Bill. The nominations for the vacancies in the Council reveal the fact that there is little enthusiasm amongst the members of the Society for a seat at the Council table. Of twenty-six gentlemen who have been nominated only sixteen aspire to the honour, and of these a dozen are at present members of the Council. The retirement of Messrs. Radley and Woolley will be generally regretted. Mr. Radley is not now in business, and with advancing years must feel the effects of the long journeys to London, especially in the winter months, so that it is not unnatural that he should wish a younger man

relieve him of the work. Mr. Woolley, on the other hand, ires because of the demands upon his time made by a large siness. It is to be hoped, however—and we believe that ere is ground for the hope—that he will return to the uncil after a short interval. Apart from the fact that he s been a valuable councillor, there is the necessity for the presentation of Manchester, one of the most important ucational centres in the kingdom. Of the four gentlemen o aspire to a seat in the Council, Messrs. Martin, Watt, and lls have experience of the contest, but Mr. Nichol, of rlisle, comes forward for the first time. What have these ndidates to say for themselves?

Dr. Greenhow's report on last year's examinations is a re cheerful document than the previous one. It will be nembered by those who read that report that it revealed an rming state of affairs regarding the Minor examination, it ng evident, as we showed, that the failures in the practical jects—dispensing and pharmacy—were increasing at a e entirely out of proportion with the "book subjects," s proving that there was less need for a scientific curri- um than for better training in shop work. Strange to , the figures now before us are the reverse of last year's. e tide has turned. The failures in dispensing were in 30 8·3 per cent. of the total number of failure, and in the o succeeding years less, but in 1883 the percentage sud- nly jumped to 17·3, and increased annually until in 1886 5, or 38·7 per cent., of the 530 unfortunate candidates led to satisfy the dispensing examiners. In 1886 the ture is brighter; 867 candidates have been examined, and these 462, or 53·28 per cent, have failed. Last year the ures were 824 and 530, so that there has been a good im- vement—not all round, however, as the following com- rison of the failures shows:—

	Total	Dispensing	Chemistry	Pharmacy	Prescriptions	Materia Medica	Botany
1886	530	250	71	82	57	34	25
1887	462	157	77	55	50	41	37

From this it appears that botany, chemistry, and materia dica were about 3 per cent. worse in 1887 than in 1886 lculating from the total numbers), that pharmacy was ter by 3½ per cent., dispensing by 5 per cent., and t prescription reading was about the same as it was in 36. It is somewhat wonderful that these figures fit in so ll with our criticism of last year, and that that criticism s been followed by a striking reversal of the current of lures during the previous seven years.

Turning to the Preliminary examination results, we find t Dr. Greenhow gives them in a form which renders com- rison with previous years difficult. The number of candi- tes shows an increase, 1,373 as against 1,305, and the lures a decrease from 51·57 to 47·56 per cent. Of these lures 19, as compared with 26 in 1886, were due to the ndidates failing to obtain the aggregate number of marks, hile 138 failed in all the subjects, which is the same figure the year before. Beyond this we cannot compare the two ars, as Dr. Greenhow does not give his figures in the same y as formerly. One important declaration is made in gard to the examination, it is this:—

"I venture to express a hope," he says; "that an amended armacy Act may be passed during the present session of rliament, enabling the Pharmaceutical Society to prepare the sanction of the Privy Council additional by-laws oviding that the Preliminary examination in Latin, arith- tic, and English shall be passed previous to the commence- nt of apprenticeship; and that an apprenticeship or finite pupilage of at least three years shall intervene be- een the passing of the Preliminary examination and a ndidate being admitted to the Minor examination."

It will be noticed that Dr. Greenhow goes farther than the Pharmaceutical Council has gone in the Bill to which he evidently refers. He wishes the Preliminary examination to be passed before apprenticeship is entered upon, whereas the Amendment Bill provides only for an interval of three years between the Preliminary and Minor examinations. He is still silent regarding the curriculum, and this silence is significant in view of the fact that the Pharmaceutical Council's Bill dealt only with that. On the whole, Dr. Greenhow's report is a somewhat colourless one. He is an ardent advocate of shop training, and that is the reason, perhaps, of his remark about Mr. Ince's class, that "it cannot supersede the necessity for the practical training and skill which would be acquired during an apprenticeship of several years' duration served under a competent master." Nevertheless it is as well for Dr. Greenhow to know that school training in practical dispensing has become highly necessary if students wish to pass the examinations, and the examinations are partly the cause of the necessity.

There was nothing else of importance brought before the Council publicly.

BRANCH SHOPS.

THE prominent attention which the recent addition to the Pharmacy Bill has directed towards branch shops is likely to have a good effect upon pharmacy as a profession, though it may be bad for a good many branch shops. Before the discussion is over, we are likely to hear more about the branch-shop business, though some interesting information has already come forward. We learn, for instance, that a number of enterprising chemists and druggists scattered over the land are in the habit of investing their money in branch shops, and running as many as they can get a decent percentage on. The percentage being the one object of the enterprise, these shops are manned and worked as cheaply as possible; and, as unqualified assistants are cheaper than qualified ones, it follows that as a rule the branches are in the majority of cases managed by the former. The system appears to be a growing one. Along with its company relative it is a practice which is eating into the heart of the better class of pharmacy. The shops which it develops in populous districts are but little different to oil-shops, though under the ægis of the law as it has been administered the sale of poisons and the title have given the former an unfair advantage over the latter.

A check on this commerce such as is proposed could not fail to exercise a wholesome influence on the more legitimate trade. We have given fair opportunity for the unqualified assistants interested in this subject to state their case, but we cannot think that they have established any shadow of reason against the Milltown clause of the Pharmacy Bill. They have acted as chemists and druggists in the fullest sense, and, though we cannot help being sorry for them personally, we are bound to desire above all the interests of the whole body. The branch-shop business, as it is carried on in a good many large towns, is a perfect mockery of the law. Qualified men are shut out, and the public are deceived by the evasion of the law which has grown up; and it seems to us that those who especially desire to encourage the true interests of pharmacy are bound to give this clause the heartiest support.

We cannot but regret to find, therefore, that the Pharmaceutical Council do not think the matter important enough to press with all their influence. What they are doing secretly we do not know, nor do we much care, for we never find any result from these solemn mysterious broodings. The course for the Council to take under the new circum-

stances, we should have expected, would have been clear. If they had good reasons they might have opposed the clause, and, armed with such, they could no doubt have defeated it. In the contrary case we cannot comprehend why they should not support it heartily. And more than that. They should have developed the principle of the clause so as to make it apply to all pharmacies run by unqualified persons. No member of Parliament could have refused to vote for such a reasonable extension of the proposal as that. To push the measure through, the Council should have taken steps to induce their entire body to work energetically for the Bill so corrected, and if it could have been passed we should have had by next year what we have never had yet—a Pharmacy Act which really meant what it seemed to say, and which could be put into operation without falling to pieces.

ELEMENTS AND META-ELEMENTS.

In his presidential address to the Chemical Society last week Mr. Crookes gave utterance to further speculative reasoning based upon the researches which have engaged his attention for nearly forty years. As a scientist and experimentalist Mr. Crookes has the rather heterodox virtue of clothing his thoughts in language which is understandable to the common mind, and he introduces similes which a magazine writer might envy. These probably are the cause of the merciless attack of Mr. Crookes's theories by a leader-writer in the *Times* of March 30, who says that they "are fantastic enough to make Democritus weep and Heraclitus laugh." The critic who thus tilts at the President of the Chemical Society attributes to Mr. Crookes statements which he did not make, and overlooks or ignores notable experiments which go far to corroborate the latest theory which has been evolved from the experiments on the rare earths.

The subject of Mr. Crookes's address was "the possible existence of bodies which, though neither compounds nor mixtures, are not elements in the strictest sense of the word," and these he calls "meta-elements." A familiar example will show what is meant. The element cerium has a yellow and a white component, which differ in basicity so slightly that their separation has hitherto proved to be impossible; but they differ decidedly in the colour of their oxides. For this reason Mr. Crookes would call each component a meta-element; and so also in the case of all bodies, components of a presumably elementary body, which differ from each other in well-marked colour or spectrum reactions, and minutely as to basicity. It must not be assumed that these are entities like the elements in importance; before they could take rank like these they must conform to the periodic law, which is proved to be indubitable, and the only way that they can find a place in the system provided by that law is by modifying our conception of an element—by considering an element to be an aggregate of slightly dissimilar atoms of the same primordial material. This aggregate Mr. Crookes would call an "elementary group." In all respects, for other than theoretical purposes, a "group" remains what we now consider an element to be. Mr. Crookes has proved by fractionation that the atoms of yttrium are not homogeneous, and, he says, "a similar absence of absolute homogeneity may possibly yet be traced in many of the 'elements' if once the right reagents are selected." This hypothesis entails the assumption that creation did not hit off the elements at certain clear, fixed points. There was, doubtless, a sharp coalescing of "protyl" creating the nodes on the periodic scale, the result being, as in the case of chlorine, a molecule which has the atomic weight 35·5; but while the matter coalesced so that the great bulk of the component atoms of chlorine have this atomic weight, there was a lagging b ind, and so we have atoms of the element which may vary rom this figure to the extent of a decimal place, while few others may stray as much as a whole number or two o one side or the other of the mean. The ultimate atoms ose rates are not exactly 35·5, but a little higher or lowe han 35 5, will congregate around the 35 5 nucleus, form g a group whose average value will be 35·5. In like m ner similar groups would be formed having the average ra s of 80 in the case of bromine, and 127 for iodine, while ter- mediate spaces would be cleared, the ultimate atoms hich occupied these lone spaces being attracted to the ch ine, bromine, and iodine groupings. These groupings rep ent what at present we call elements, but which Mr. C kes thinks may possibly consist each of an element an f a certain number of meta-elements, or each may be form d of a whole group of meta-elements, none of which great pre- ponderates over the remainder.

Opposed to this theory is the statement of Sir W. erk- Maxwell, the most noted authority on the subject, tha "the molecules of the same substance are all exactly alike." This and other similar statements, Mr. Crookes consid , no longer accord with facts, and he quotes the work of We bach as well as his own in support of his assertion. This w k is in connection with the rare earths, and as some are sc ical of the validity of proof from such sources, it is well t call the fact that Delville and Troost's determination the vapour density of selinium showed that at a temperat e of 1420° it gives 161 as the molecular weight, which corre nds to the value 157·7 obtained by quantitative analysis. om- menting on this Dr. Lothar Meyer says, "At this temp ture selenium vapour appears to consist essentially of mol les, having the weight Se = 156, with which, however, a tain number of larger molecules are mixed. . . . The same true of chlorine, bromine, and iodine." As we pointed ou in a recent note on this subject, "the vapour density of io e at 447° C. leads to the molecular weight 251·2, and at 1 0° C. it is 251·7. Here it is probable that the higher temp ture has caused the vaporisation of heavier molecules th are vaporised at the lower temperature." Of course thes facts fit no better with Clerk-Maxwell's theory than dc Mr. Crookes's, but we must take our facts as we find the and change our theories to suit the facts. That has been t fate of theories since the dawn of science. On the whole erc- fore, we cannot but consider Mr. Crookes's suggest n re- garding the "meta-elements" to be a reasonable one. It is unlikely that the present generation will have much for the term, because it is applicable only to a limited n ber of cases; but as chemical research advances such an alies regarding the basicity and other elemental charaeteris s as Mr. Crookes and others have discovered in the rare rths are likely to become apparent in the more common el ents, and confusion will be averted by attributing these an alies to the existence of "meta-elements," until, at all eve , the limits of knowledge have been reached.

OPPOSING THE PHARMACY B L.

A CIRCULAR headed "*Re* the Pharmacy Act Ame ment Bill," dated from 2 Upper Station Terrace, Cardiff, and gned "A. Timmis," has been sent to Members of Parliament i rder to ensure their opposition to the Bill. The writer sta that the Bill contains a clause, "advocating the need of urri- culum for students for a period of three years, wi ly at variance with the wishes of the bulk of chemists an rug- gists throughout the country." Quotations are give from various authorities, and especially from this journal, t the extracts alleged to be from our articles are not quit airly

giv. It is not quite clear in all cases which are our remarks an which are those of Mr. Timmis, and where ours are cle y quoted various articles written on different occasions see to have been mixed up. Some of the paragraphs ap rently extracted from THE CHEMIST AND DRUGGIST we not trace, and do not believe were ever written by us.

REVIEWS AND Literary Notes.

Th Mercantile Year-book and Directory of Exporters, 1888. London: Lindley, Jones & Co. 6*s*.

E object of this work is to give a list of all the London shi ers of merchandise, showing what kinds of goods they ex t, and to what parts of the world. Such compilations are ecessarily imperfect, because of the fact that so many de rs ship their goods through agents. But manufacturers wi no douht, hear of many shippers of their goods from a lis f this kind with whom they might have been otherwise un quainted. There are two maps with the book, one of Lo on and one of the world, which increase its cost but do no dd much to its usefulness.

Ea rimental Chemistry for Junior Students. Part IV. Organic Chemistry. By J. Emerson Reynolds, M.D., F.R.S. London: Longmans, Green & Co. 12mo. pp. 384. 3*s*. 6*d*.

E series of four practical manuals by Professor Reyno is completed by the present one, which deals in a syster tic manner with the chemistry of the carbon compounds. Ap t from pure chemistry, the book is of considerable ph naceutic interest, as many pharmacopœial compounds are escribed in it, and their relation to non-medicinal compo ds is shown. Although intended as a laboratory manual, the ook also provides that "theoretical" information requ d to interest the student in his work, and this interest is ll kept up throughout the long series of experiments wh h are described. The arrangement of the volume is on the conventional plan, beginning with methyl-alcohol and en ng with the alkaloids. We can recommend this work to udents beginning the study of organic chemistry.

T Medical Annual and Practitioner's Index, 1888. Bristol: John Wright & Co.

AR BOOKS are useful to people who do not keep themse s posted by reading current literature, or who do not keep pe dicals in a fit state for reference. The "Medical Annual" is ear-book which presents, in 488 octavo pages, a digest of th medical literature of last year. This it does in two se ons: the first, entitled "new remedies," takes notice of ne applications of well-known medicines, and describes the pr erties and use of those which were introduced during th ear. Consequently we find in this section a full account of ie discovery and physiological properties of "stenocarpi," but none of the twenty-two editors have been wide-aw e enough to notice that before the year ran out "stenocaine" was proved to be a mixture of cocaine hydrochl rate and atropine sulphate. Under arnica there is an ab defence of the use of that drug as a remedy for bruises, in which we can trace homœopathic inspiration: "The tin ure of arnica is a very powerful drug, and when used as a ion the dose should never exceed 10 to 15 minims to the on e of water, *and under no circumstances* should it be ap ied when the skin is broken." The greater part of the vo me is devoted to "new treatment," and this will be of m value to general practitioners. Most of the articles are sig ed by the writers, who are authorities in the departments of edicine and surgery which they take up. The articles ar generally of a condensed nature, but occasionally there is a tendency to describe cases with more fulness than appears to be necessary in a "year-book." A large number of notes are taken from foreign sources, which are not easily got at. In transcribing formulæ (of which we may say there are a large number in the "Annual"), no care has been taken to give the substances in the English equivalents, so that such unusual names such as "ung. porci" have crept in. There are several appendixes to the volume, including "progress in pharmacy" and "new inventions," which partake of the character of trade notes.

Proceedings of the American Pharmaceutical Association. We recently received this volume, which records, like our own year-book, the progress in pharmacy during the year ending June 30, 1887, and includes a complete report of the proceedings of the association at the meeting held in Cincinnati in September last. All that need be said of the volume is that it is quite up to its predecessors so far as the practical nature of its contents are concerned, and that a great improvement has been made by printing the discussions on the various papers after the papers themselves instead of in the minutes, as formerly.

Veterinary Treatment.

SCOURING, OR DIARRHŒA, IN CALVES.

THIS malady is the cause of more losses among calves than even the dreaded anthrax, as the former is, like the poor, "always with us," while the latter makes occasional visits of more lasting impressions. It is called by a variety of names in different districts; among the commonest are scours, skit, white scour, black scour, &c. White and black scour indicate different forms of diarrhœa, or different stages. The most frequent form of scours is that found in artificially reared calves, and is of the white kind. It is undigested milk, or curdled, in the fourth stomach, and is not, as is supposed by some, due to inflamed mucous membrane. Professor Gamgee says, "In the many cases I have examined there was usually a peculiar pallor, or indications of checked function, in the fourth stomach and intestines. It is the mass of half-curdled milk in these organs and the emaciated appearance of the tissues which may be regarded as characteristic of diarrhœa in suckling quadrupeds." This opinion being supported by the best observers, there should be no insuperable difficulty in the treatment unless constitutional and hereditary disease is a concomitant. The old-fashioned remedy of opium and chalk, and cordials such as aniseed and fœnugreek and cumin have much to recommend them, and will bear scientific examination—indeed, it is a puzzle to modern scientists how the illiterate class of men who have for ages practised with considerable success among animals could have found out remedies without knowing the why and the wherefore—seeing through a glass darkly, yet attaining their object. Of course they were illumined from time to time by medical men and others of better education, but the present generation, being averse to all improvement, resent any fresh ideas, and are dying out under the Veterinary Surgeons Act of 1881.

Infusions of astringent barks such as oak and elm will often answer the purpose where the chalk and opium seems too clogging, but the admixture of a fourth part of lime water with the milk has the recommendation of being cheap and easy of administration, as well as effective. The following is a very good mixture for general use among calves:—

Pulv. opii	gr. v.
„ catechu	℈ij.
„ cretæ præp.	ʒij.
Ol. anisi vel menthæ pip.	℥iij.
Muc. acac.	ʒj.
Aq. ad	ʒij.

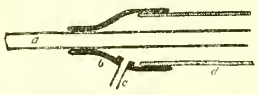
M. To be given in gruel and repeated next day if necessary.

Corticis quercus	℥j.
Sodæ carb.	℈j.
Aq. bullientis	Oj.

Infuse for an hour. Dose: Two tablespoonfuls night and morning.

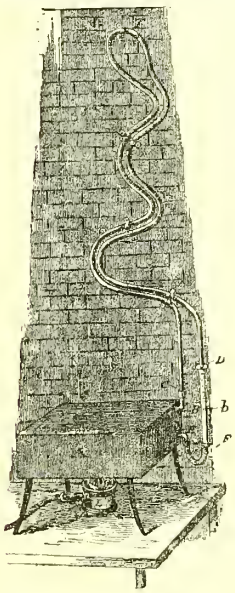
USEFUL LABORATORY APPARATUS.

LIEBIG'S CONDENSER.—The *Journal of Analytical Chemistry* describes a form of Liebig condenser, which has the advantage of simplicity and considerable flexibility, while it can be extemporised and made of a size to suit any particular operation. As will be seen from the illustration, it consists

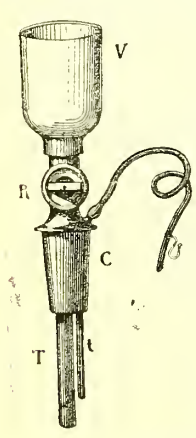


of two plain glass tubes, connected together by a piece of stout rubber tubing (*b*). Through a hole in this a small piece of glass tubing (*c*), with a shoulder fused at the inner end, is pushed, which serves for the passage of water. A similar arrangement is made at the other end.

A CONSTANT WATER-BATH.—Dr. B. F. Davenport described this bath in a recent issue of *Rundschau*. As will be seen, it consists of an ordinary copper water-bath, but from the point *B* projects a ½-inch brass tube *B C*, which turns up at a right angle. At *E* is a stop-cock, which is connected by a thick rubber tube with the glass tube *D F*, which is fastened against the adjoining wall. Connected with *C* by a rubber tube joint is a ½-inch block-tin tube of 20 feet length, which extends up the wall to which it is fastened for 10 feet to the point *T*, whence it returns and ends just over the top of the glass tube at *D*. The bath is filled with water to just the level of *B b*. The steam generated by the constant boiling is condensed in the tube *C T D*, either before or after reaching the top *T*, and returns to the bath at *C* or at *D*, where it drops into the glass water-gauge *D F*. The advantages of this arrangement are obvious.



THE AUTO-FILTER.—The apparatus which we figure here has recently been introduced in France, its purpose being to overcome some of the difficulties which accompany the use of ordinary funnels. The advantages claimed for it are (1) that filtration goes on regularly without the introduction of a foreign body between the stem of the funnel and the neck of the bottle; (2) the flow of liquid stops automatically when the liquid reaches a certain height in the bottle, so that overflowing is impossible; and (3) the funnel may be taken from one vessel to another without the loss of any of its contents. The parts of the apparatus are:—V, a tin tube lined with vulcanised indiarubber, into which the extremity of an ordinary funnel is fitted; R, a stop-cock; C, an indiarubber "cork" for fitting into the neck of the receiving vessel; T, a tube connecting through the stop-cock with V; *t*, a small tube to allow the escape of air from the receiving vessel as filtration proceeds; to this is attached a piece of indiarubber tubing with a hook whereby it may be attached to the funnel. When the liquid in the vessel reaches *t*, it flows up the tube, thus stopping the exit of air, and filtration ceases.



THE DRUGGIST'S SHOP WINDOW.

IN the course of a lecture published in the *National Druggist* Mr. John S. Moffitt, of St. Louis, dealt with the inquiry, "What shall I do with my show window?" There are, he said, in our own city some show windows that are positively disgraceful to the proprietor. I have in my mind one the contents of which have been changed but twice in a year and the glass but rarely, if ever, cleaned, while many contain such an assortment of goods that the passer-by is not attracted, or does not even look at the window.

The shop windows in Paris are, as it were, the thermometers of Paris life; by looking at them you can tell what is going on and what is the coming event. So it should be in the drug trade; a glance at the windows of your store should call to mind the household necessities, and a proper display of seasonable goods will bring to the store where displayed a corresponding trade in the article shown.

A friend of mine in Boston had a very large window, the glass measuring 10 feet high by 8 feet wide. This window was on a prominent corner, and was a source of worriment to the owner. I noticed that passers-by hardly looked at it, so I said to him, if he would allow me to spend $5 I would try and arrange the window the next day. Calling upon one of my wholesale friends, I noticed that he had in an upper loft an old liquor barrel, one of the many-hooped kind that were used years ago. I said to him, I want to buy that package. He asked for what. I said, I want it for one of your customers; and bought it and sent it to the store. During the forenoon I called on an upholsterer and made an engagement to meet him at the store of my friend, and on going to the store, I found the upholsterer and the liquor barrel. My friend, the proprietor, smiled when he saw the combination, but, tacking a sheet of paper in front of the window, we went to work. Cleaning out the large assortment of stuff, such as soaps, perfumes, and a hundred laser articles, I had the upholsterer take the measure of the window for a lambrequin reaching forty inches from the base, to be made of heavy creton. Measure was taken for a piece of bright red carpet to fit in the bottom of the window, and the mechanical part of the work was finished; so the next day, after the upholsterer had finished, without anything in it, the window looked a hundred per cent. better. Then taking the liquor barrel, after the ends had been neatly varnished, it was placed in the window on a neat base made of two boxes nicely covered with the carpet. A card, neatly labelled, "Perfectly Pure Imported St. Thomas Bay Rum," was placed upon the barrel, and about four-dozen pint bottles of bay rum, neatly labelled, composed the show. The canvas screen was taken down, and 300 pints of bay rum were the sales of the following six days. That window has been changed weekly since. The week after with an original rose-water can, arranged in same manner, and rarely more than one article at a time.

A window in the drug store of Mr. Evans, on Chestnut Street, Philadelphia, attracts every passer-by. I always go out of my way to notice this window. The first time I saw it it contained a clean gunny sack, apparently filled with tooth and nail brushes. The next time I saw it—two days after—a transformation had taken place, and the window was filled with his own make of beef, iron, and wine, in square bottles, with purple wrappers, and white labels with black letters, producing a beautiful effect.

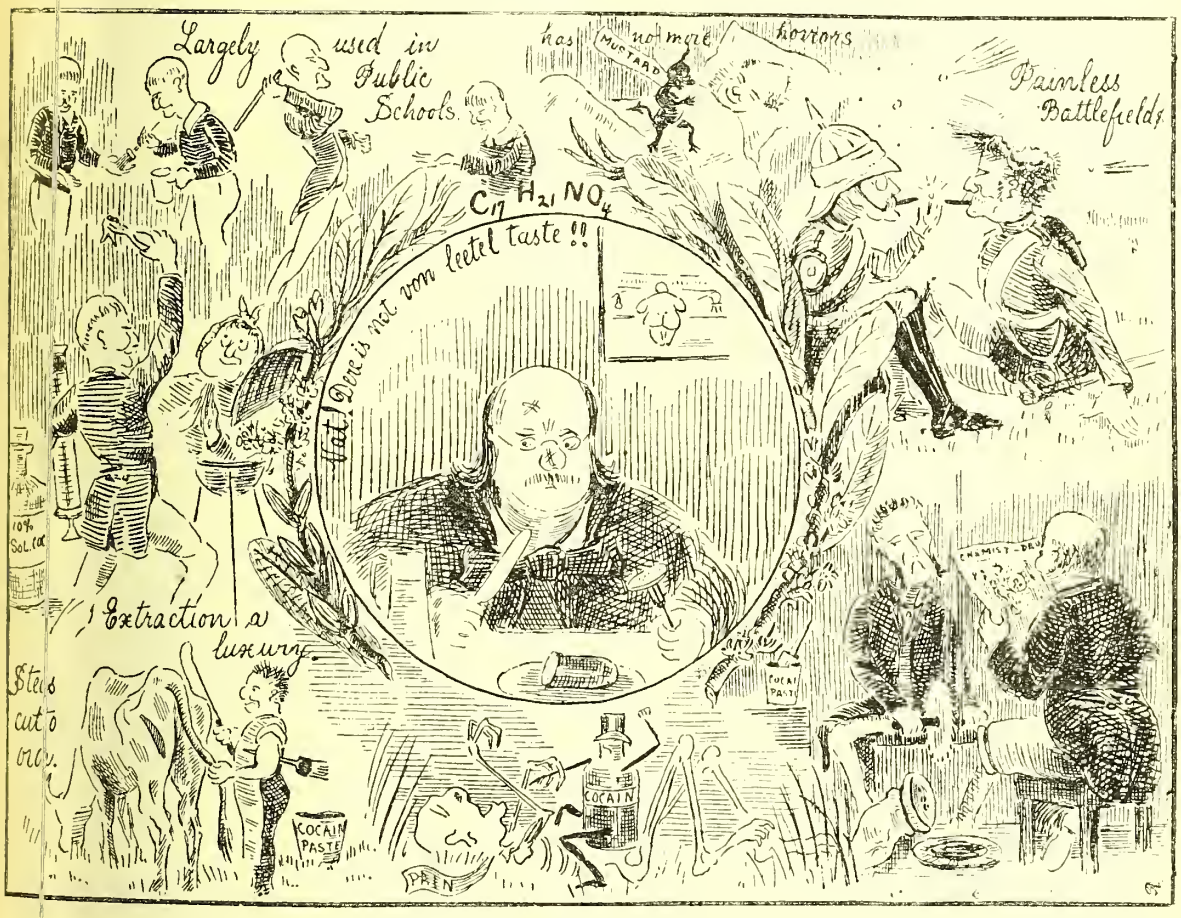
The druggists in the lower part of New York City on Broadway, frequently rent their windows to the manufacturers of patent medicines. Tutt's pills, Holman's pads, and Allcock's plasters have at times occupied Ditman's window, under the Astor House, and immense sales have resulted from the display.

A case of Calabrian liquor in the window of one of our

dow wn stores has attracted much attention, and doub'- less l well paid the owner.

No as to the time-honoured show bottle in the window, a per n cannot see the drug-lights when the windows are frost and covered with sweat, and if one is on the same side the street, where the drug store happens to be in the midd of the square, the show lights are not visible twenty yard way. I am of the opinion that a new light will be inve d to take the place of the show globe; in fact, I have hear f one to be placed upon the outside, which, as near as I car escribe, is as follows:—

"T s sign is conveniently formed in the shape of a case, its th ness about half its width, having a door giving access the interior. In the sides of this case are arranged glasses of the kind commonly known as 'bull's eyes,' of different sizes and colours, forming the translucent parts of a druggist's compound show bottle, the round bull's eyes forming successive portions of the bottle. It is intended to make the remainder of the design figured work upon the outside of the case in bright colours, such as gold or silver leaf, which will reflect the light, and the outlines thus formed carry out the outline of a show bottle. At night the light passing through the bull's eyes will also illuminate these bright outlines, and the show-bottle appearance will be carried out even more fully than by daylight. The lights, as arranged inside the case, are of gas, but when gas is not obtainable oil will be found to answer the purpose nearly as well."



COCAINE AND ITS FAULTS.

A Nocturne in $C_{17}H_{21}NO_4$, Conveying the Recollections and Impressions of a Dreamer.

Tim 8.40 a Wednesday eve; scene in Bloomsbury's theatre es,
A rowd of pharmacists before us;
In nt of them some higher beings sit upon a cross-bench— ese are the wise
C ncillors and profs. Sonorous
Sou s proceed from out the lips of one who stands above is fellows—on
A latform—cocaine his theme.
In audience sits a wan and worn-out youth who ever and non
H drowsy head pulls up. Now a dream
He ves in—a world of suffering—here reproduced most ruthfully.
I ams have their promptings, the centre here
A man is, responsive to Horatio's sound authority. Coolly schoolboys watch the dreaded cane appear.
Last line a foot too much—what matters it? Too little by a leg the old man
In the corner, but he knows it not.
Thanks cocaine and the *C & D's* absorbing pages. Far on Soudan
's field struck by the sword and a passing shot,
Two warriors sit, one armless, t' other crownless. Smokes of coca they inhale,
And thus have we the painless battlefields.
The mustard hot no more, the aching tooth—at very name on't cheeks grow pale—
To forceps grip sans pain and groaning yields.
Below the ox converts the soulless grass to tender and juicy steaks
For grill and man. His haunches cocaine
Has rendered lifeless while the butcher cuts the mouthful. The dreamer wakes—
The vision's gone away with bad hygrine. Cacodyl

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds for objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings London, W.C.

From the "Trade Marks Journal," March 21, 1888.

"DRINKWATER'S SPORTSMAN'S LINIMENT," other wording, and figure, on label; for a liniment. By J. D. Ghosley (trading as John Drinkwater), 3 Cathnor Road, Shepherd's Bush, W. 62,732.

"MITRE," under figure of a mitre; for chemical substances. Class 3. By Allen & Hanburys, Plough Court, E.C. 63,017.

Figure of a youth in a scull boat, with "Marking Ink" thereon, and signature of depositors; for marking ink. By Cunnen & Co., Parade, Leamington Spa. 65,105.

"LITTLE'S PATENT POWDER DIP," and other wording, on label; for sheep dip. By Morris, Little & Co, Doncaster. 65,693.

Figure of a calf's head, between "Calf" and "S. M. F."; for chemical substances. Class 3 and Gelatine. By S. M. Frankenstein & Co., 9 New Broad Street, London. 65,975–6.

Figure of a bottle of perfume; for perfumers. By E. Meyer (trading as Edward Pinaud), 37 Boulevard de Strasbourg, Paris. 67,061.

"PICKERING'S POLISHING SOAP," and monogram; for common soap, washing-powder, &c. By J. Pickering & Sons, Albyn Works, Sheffield. 68,594.

"VINCENT WOOD'S MEDICATED PINE WOOL FELT"; for chemically-prepared woollen felt and articles made thereof. By V. F. Wood, 29 Paternoster Square, Newgate Street, E.C. 68,787.

"THE NEW ST. JOHN'S HORSE POWDERS," and other wording with figure, on label; for horse powders. By John Boon (trading as J. Boon & Co.), 86 High Street, Battersea, S.W. 68,800.

"ARCTIC SODA-WATER," and other wording, on fancy label; for aërated waters. By C. Watkins & Son, Hereford. 68,906.

"HATT'S OLEAMELLIS," and other wording, on label; for a preparation for the hair. By H. F. Hatt (trading as H. & A. Hatt), Magdalen Street, Oxford. 69,201.

Figure of Balmoral Castle, and the word "Balmoral"; for chemical substances (Classes 2 and 3) and perfumery. By Davidson & Kay, chemists, Aberdeen. 69,421–3.

"JOSEPH BUTLER'S 'HAIR TONIC'"; for a preparation for the hair. By J. Butler, 101 George Street, Altrincham. 69,477.

"LOTIFORM"; for a material or substance—Class 1, for preservation of liquids; Class 2, for lotion, &c., for sanitary purposes; and Class 3, for lotion for medical and surgical purposes. By the Sanitary Wood-wool Company, 11 Hatton Garden, E.C. 69,931–3.

"MRS. BURTON'S PILLS AND PLASTERS," on label, with figure; for pills and plasters. By H. W. Cowley, chemist, 18 Alfreton Road, Nottingham. 69,970.

Signature of depositor, also a portrait; for chemical substances (Class 3). By H. Thornber, chemist, Bedford. 70,012.

Figure of an eagle; for linseed and cottonseed oils. By W. Pearson and Ed. Pearson (trading as E. & W. Pearson), Exchange Street, East, Liverpool. 70,076.

Chinese figure, and wording, on label; for chemical substances (Class 1). By J. Lembke & Co., Hong Kong, and elsewhere. 70,280.

From the "Trade Marks Journal," March 28, 1888.

"MAGICIAN"; for chemicals (Classes 2 and 3), soaps, &c., and perfumery. By W. Gossage & Sons, Widnes, 63,136–9.

"OLYMPIAN OILS" (white letters on black block for an embrocation. By J. H. Read, 818 Holloway Road, N. 63,552.

"BEESON'S AROMATIC ALUM SULPHUR SOAP"; medicated soap. By William Dreydoppel, Philadelphia, U.S.A. 65,924.

Heraldic design (including figures of animals and crown) under the words "Health for the Dumb"; for veterinary preparations. By Day & Sons, Crewe. 66,989.

Figure of a block of ice, containing fruits and fishes for a saline antiseptic compound. By R. C. Baker, Bridgegate, Annerley Hill. 67,065.

"MIDLAND VINEGAR," and figure of a seal on label; for vinegar. By E. Eastwood and E. S. Moore (trading as the Midland Vinegar Company), Aston Cross, near Birmingham. 67,125.

"STACEY'S HAIR RESTORER"; for hair restorer. By Joseph Stacey, 6 Colwyn Street, Oldham. 67,173.

Round label, with figure of a medal in centre, designation of depositors, &c.; for flowers of sulphur. By James Chambers, trading as James Chambers & Co., 23 Birchin Lane, E.C. 68,219.

Geometric figures (star in the centre, and heart in the corners of an oblong); for disinfectant fluid. By George Condy, 14 Cologne Road, Battersea, S.W. 68,643.

"THE SUAVITER," and other words, for chemical substances (Class 3); and similar words, for cleansing preparations. By Dr. Jaeger's Sanitary Woollen System Company (Limited), 95 Milton Street, Fore Street, E.C. 68,862–4.

"DOBSON'S PERFECT FOUR-WAY PERFECT BOTTLE"; for glass bottles. By J. W. Dobson. 68,919.

"JOHN WOOLDRIDGE," and figures on label; for chemical substances. Class 3. By J. Wooldridge, 9 Great St. Helens, Bishopsgate Within, E.C. 69,117.

"BERRY'S OINTMENT"; for an ointment. By Charity Hodges, grocer, Belgrave Road, Tunbridge Wells. 70,167.

Figure of a griffin, and monogram; for Epsom salts and seidlitz powders. By John Bury (trading as the New Discovery Baking Powder Company), 63 Corporation Street, Manchester. 70,218.

"BELL'S LACTIC FOOD"; for a condiment or spice for feeding cattle. By Henry Bell, Chemist, Watford. 70,761.

"LANE BROS. SUPERIOR JET-BLACK WATERPROOF HARNESS COMPO," and other wording on label; for harness composition. By John & Richard Lane (trading as Lane Bros.), 91 Alderney Street, S.W. 71,604.

From the "Trade Marks Journal," April 4, 1888.

"THE DRUFFORD," across figure of a sailing ship; for aërated waters. By H. G. Rickard, Mill Lane, Sexton, S.W. 53,466.

"THE JUBILEE MINERAL WATER WORKS," signature and address of depositor; for aërated waters. By G. L. Zissel, High Street, Hounslow. 61,930.

"THE BRIXTON SYPHON WATER COMPANY," and signature; for aërated waters. By W. S. Wardle & Co. (trading as the Company), 295 Brixton Road, S.W. 64,586.

"THE NIAGARA BOTTLE," on figure of Niagara Falls. By Barnett & Foster, 26 Eagle Wharf Road, E.C. 64,652.

"THE ABBEY MINERAL WATER WORKS," and signature; for aërated waters. By C. A. Potter, 13 Wood Street, Westminster, S.W. 67,504.

Diamond-shaped label; for mineral waters. By R. Ivory & Co., Brighton. 67,571.

Three ...gged figure; for mineral waters. Also "Hygeia"; for ...ërated waters. By W. & L. Parry & Co. (trading as ...e Pure Beverage Company), Ospringe Road, Kentish T...n, N.W. 68,367, 69,049.

"PUM...INE," and signature of depositor; for chemical substances (Classes 2 and 3). By G. & G. Stern, 11 Billiter S...are, E.C. 68,700-1.

The s...e; for clothing, soaps, and perfumery. 69,154–6.

"MEA...OW SWEET," other wording and figure, on label; for p...umery. By T. D. Wright, pharmaceutical chemist, S...thport. 69,078.

"POL... and figure of polo players; for chemical substances (...ss 3). By T. P. Griffin & Co., 2 Philpot Lane, E.C. 7...26.

"VIN...IA"; for chemical substances (Class 3). By Blon...da & Co., 76 New Bond Street, W. 71,447.

"REC...ARES"; for mineral waters. By J. S. Curtius, 9 C...at St. Helens, E.C. 71,635.

Foreign and Colonial.

HO... BITTERS AS A LIQUOR.—The Tasmanian authorities have ...tified that "Hop Bitters" having been examined by the G...rnment analyst, it has been resolved that the prepara... must be regarded as a spirituous liquor, and must only ... sold by persons licensed to deal in such beverages.

OS...ND HYGIENIC EXHIBITION.—Among other exhibitions of th... year, Ostend in Belgium, announces an international one o... Hygiene and Sauvetage," to be open from June to Septe...ber. Medicine and pharmacy are to be very extensively repre...ted, and in the prospectus the promoters say, "We make... appeal to all specialists, scientific or practical, inviting... them to exhibit at Ostend either their products or their meth...s." Dr. Burgaeve, of the University of Ghent, is the actin... president of this scheme, and Mr. A. Bouchery, pharmaci... of Ostend, is one of the secretaries.

VI...ORIAN CHEMISTS AT CRICKET.—The annual match betw... the wholesale and retail chemists of Melbourne was play...on the Melbourne Cricket Ground on February 14. The ...y was very fine, and the wholesale drug trade made of it a ...eral holiday. The wholesale men got a long way the wors... f the hargain on this occasion only, their whole staff being ...isposed of for the humble total of 37, while the retaile... following compiled the handsome score of 467, to whic... number Mr. Heath contributed 211, and retired unco...uered. A bat recording the event has been presented to hi... by the Pears' Soap Melbourne Agency.

A ...HEMICAL WEAPON.—Dr. Junemann, a professor of chen...try in Austria, has just made public what he thinks to be a ...onderful discovery. He claims to have invented a fluid ...hich, when brought into contact with the air after the ...losion of a shell in which it has been contained, is tran...rmed into a gas, which, being heavier than the atmo...heric air, falls by its own density to the ground, killing all m... and animals within its reach, and, moreover, destroying ...n, bronze, and other metals, as well as setting all inflam...nable things on fire. The learned doctor states, in a lette... to a Viennese newspaper, that so far back as 1848 he offer... his invention to the Austrian War Office, which, howe...er, both then and on a subsequent occasion, declined to e...erimentalise with the homicidal vapours.

TH... MERCHANDISE MARKS ACT.—Mr. Edmund Johnson, hon... c. London Trade Marks Committee, has addressed a long ...tter to the Hon. Julian E. Salomons, Q.C., Vice-President of th... Executive Council, New South Wales, lately staying in Lon...n, urging him to take steps to induce the legislature of h... colony to take the lead in applying the provisions of the ...erchandise Marks Act. It is argued that while the Briti... consumer is being fully benefited by the legislation of l... year, colonists may already suffer, or will soon be suff...ng, a corresponding disadvantage through being inundat... with the inferior and falsely-marked goods now being dive...ed and shipped direct by manufacturers abroad. Such manufacturers, it is added, are even known, in some instances, while affixing forged British trade-marks to their worst qualities of goods, to soon afterwards introduce into the market a better class of merchandise under their own genuine brands, which permanently replace the original, brought first into disrepute by means of the previously perpetrated forgeries. Mr. Salomons, replying on the point of leaving London, says, "The subject is an important one; and if on my arrival in Sydney I find that it has not meanwhile received the attention of the Government, I will immediately bring the matter under the notice of my colleagues with a view to early and effective legislation."

OPIUM-SMUGGLING IN THE UNITED STATES.—In a recent issue we made mention of the discovery of extensive frauds on the United States Treasury in connection with opium-smuggling. Since then further disclosures have been made, which seem to indicate the existence of a powerful "ring" of opium-smugglers in the Eastern States, as well as in California. The names of two or three of the largest New York drug firms, well known also on the London market, are brought into unpleasant prominence in conjunction with these transactions; but it is only right to say that the firms in question utterly deny the imputation. The New York smugglers appear to have carried on their business principally with Cuba, and a few months ago the steamer *Cienfuegos*, plying between New York and Havana, was seized by the Customs officers at the latter port, eight cases of opium having been found concealed between her decks. The owners of the vessel had to pay a fine equalling about 1,500*l.*, and they thereupon brought an action against a New York drug house to recover that amount, alleging that the opium had been brought on board of the vessel by that firm's servants without the captain's knowledge. The official statistics of opium withdrawn from bond at New York for export to Havana, compared with the returns of the Spanish Customs giving the quantity of opium received at Havana from New York, show a wide discrepancy, representing about $90,000 in duties which were never collected by the United States Government, although, it is said that the opium was consumed in the States, being withdrawn from bond under the guise of exportation, and afterwards smuggled back again.

WHOLESALE DRUGGISTS *v.* WAREHOUSE-KEEPERS.—The *O. P. & D. Reporter* makes mention of a case now before the New York law courts in which Messrs. Stallman & Fulton, drug importers of New York, are suing Messrs. Kimberly & Co., bonded-warehouse keepers, for damages for preventing the delivery of goods sold on contract by the complainants. The present case has arisen out of a quarrel over 85 bags of orris root, which Messrs. Stallman & Fulton had stored in one of the warehouses owned by Kimberly & Co. The whole lot was sold by sample to a Boston house, but was subsequently rejected by the purchasers on account of being worthless, the root having absorbed moisture, and its mouldy condition rendering it unfit for use. The goods were returned and Stallman & Fulton had to pay damages. They answered that the root was in first-class condition when placed in the defendants' warehouse, and in order to cover the loss sustained the matter was brought to the attention of the storehouse owners. The latter said they were not liable in such cases, upon which Messrs. Stallman & Fulton declined to pay the storage bill of $77. It happened that they had drugs in all the warehouses of Kimberly & Co., and when the amount of the bill for storing orris root was refused, the latter firm impounded all the complainants' goods, amounting to $40,000 worth, and declined to release them or allow access to them under any circumstances. Messrs. Stallman & Fulton meanwhile went on selling their goods stored in Kimberly & Co.'s warehouses, but of course found it impossible to deliver what they had sold. The complainants succeeded several times with the assistance of warrants from the court in obtaining possession of parcels of their goods, but the defendants on their side appear to have again seized these goods before they could be got out of reach.

ON the occasion of the exhibition at the centenary of the Bologna University, there will also be celebrated the centenary of the discovery of galvanism. There will be an exhibition of objects relating to this discovery, and a commemorative medal will be issued.

Medical Gleanings.

Relief in Choking.

A Curious method of getting rid of a piece of ham fibre in the gullet was tried recently by two American physicians. Various mechanical methods were tried without effect, and ultimately some of the following solution was injected down the gullet:—

Trypsin (Fairchild)	gr. xxx.
Sod. bicarb.	gr. x.
Aq. destil.	ʒj.

Shortly afterwards another unsuccessful attempt was made to get rid of the obstruction by mechanical means, but next morning when the child attempted to drink water he swallowed without difficulty. A short time afterwards he vomited, and in the water ejected was found a number of fibres of the meat. It seems justifiable to conclude that the morsel had been so digested and softened by the trypsin that it was dislodged by the swallowing of the water.

Corrosive Sublimate Dressings.

According to the investigations of Laplace the addition of tartaric acid to sublimate and albumen solutions ensures the full activity of the antiseptic, indeed it appears that the combination of an acid with the sublimate increases its antiseptic powers, so that weaker solutions may be used.

The solution employed is the following:—

	Parts
Corrosive sublimate	1
Tartaric acid	5
Distilled water	1,000

Gauze, cotton, &c., are soaked for two hours in a solution containing 0·5 per cent. of the sublimate and 2 per cent. of acid. Laplace obtained very satisfactory results with this dressing in the treatment of suppurating wounds.

The Antiseptic Powers of Iodoform.

Ruyter states that solutions of iodoform in ether and alcohol have greater antiseptic properties than the powdered drug, owing to the production of free iodine. The following solution was found an excellent antiseptic, and much superior to the ethereal one:—

	Parts
Iodoform	1
Ether	2
Alcohol	8

The author is of opinion that iodoform has little power except when in contact with the fluids of the body, whereby it is decomposed and is then capable of acting on bacteria.

Strophanthus *v.* Digitalis.

Professor Langaard, in the *Phar. Zeit.*, thus sums up the observations of others regarding the therapeutic action of strophanthus:—"(1) All observers speak highly of the beneficial action of the drug upon the heart. The contraction of that organ is stronger and more rigorous, the pulse fuller, more regular, and slower. (2) The different disturbances of respiration, dyspnœa, and asthmatic affections, as also the distress and anxiety of the patient, are more relieved by strophanthus than by digitalis. (3) The secretion of urine is often enormously increased, and the œdema disappears. This effect is not only produced in cases of heart disease, but also in *Morbus Brightii*, and, according to Pinn, in such a high degree, that he believes that strophanthus will in this disease entirely supersede digitalis. (4) The unpleasant effects often following the use of digitalis, such as loss of appetite, nausea, and vomiting, which sometimes necessitate its discontinuance, are very rarely observed with strophanthus. (5) The remedy is not cumulative. The absence of this property enables physicians to administer it for several weeks without interruption, which is not possible with digitalis. (6) The effect is very rapidly produced, but is not so lasting as that of digitalis. (7) Strophanthus is to be preferred before digitalis when a quick effect is desired, and further in all cases where great dyspnœa, dist ss, and anxiety are suffered by the patients, which digitalis oes not affect. This remedy is also to be preferred before s rival already named, when a sustained stimulation of the echani- cal action of the heart is necessary, and when digi lis can- not be given on account of the cumulative actio already referred to."

The Curability of Consumption.

In an article on the "Etiology and Curability of nsump- tion" (*Brit. Med. Journ.*), Dr. W. R. Thomas remarl that he has reason to be well satisfied with the success of s treat- ment of the cases of phthisis which he had to ta charge of, and considers that that success has been depe ent not upon any special mode of treatment adopted. E ry case ought to be specially studied. Medical men who ve cod- liver oil, a tonic mixture, and a linctus to every pa nt will not be successful as a rule. About seven-eight of Dr. Thomas's patients have practically recovered. In l these cases he first of all endeavonred to remove the use, if found. The patient who had lived in an impure at sphere was removed from it. A constrained position whe t work was avoided. The working in a close room was pr nted if possible. The habit of taking alcohol or tea to e ess was put a stop to. Daily exercise was recommende when- ever the weather permitted of it, and good nouris g diet recommended to be taken at regular hours. A blis is ap- plied to the chest, and certain medical treatment s indi- cated by the symptoms, adopted, and under the in nce of this treatment the patient has frequently got well. Quinine Dr. Thomas finds to be one of the most useful ren lies; it improves the appetite, it tends to check the noctu al per- spirations, and acts as a general tonic; but many atients cannot take quinine, especially those who suffer fro gastric derangements, which have to be specially treated b re it is administered. Iron in some form or other is ind ted at some time. The perchloride he hardly ever prescri s, as it destroys the teeth in time, however careful the pa nt may be. He prefers syrup of the phosphates, citrate of n and quinine, citrate of ammonia and iron, or dialysed ir

Results of Large Doses of Arsenic.

Mr. Jonathan Hutchinson, F.R.S., has recen called attention to the constitutional danger of administe g large doses of arsenic for long periods. He is of opinio that a kind of cancer results, and he showed such a case which a corn on the sole of the foot of a gentleman who l taken arsenic for psoriasis for many years ulcerated, an at first had the appearance of perforating ulcer. The palm of the hands also became affected, small corns develop . The growth in the foot was excised, and the patient r vered. Another case had an American origin, and was t ted as syphilitic, but ultimately the patient's medical ad sers in the States and in Europe came to the conclusion at the disease was cancerous, and the hands had to be am tated. Amongst other cases described was that of a young ly who had taken arsenic for many years with occasion inter- missions An ulcer had developed on the crest of t ilium, the glands enlarged, a tumour formed in the thigh, d the patient died at the age of 25, owing to the enlarg ent of these growths. Mr. Hutchinson also mentioned ase in which the patient was a clerk, aged 34, who h taken arsenic for a long time for psoriasis. The palms of l hands and soles of his feet were speckled over with corns en he applied at the Skin Hospital; finally, epithelial canc of the scrotum appeared, and was excised; the patient s then lost sight of. He thought the facts he had brought rward warranted him in advancing the theory that the c cer in these cases was due to arsenic with the hope that attention might thus be more generally directed to the point. n the course of the discussion on the paper, Dr. Edmunds id he had seen enormous doses of arsenic (drachm doses of wler's solution) taken as a prophylactic against ague in t Fens, but had never seen epithelial cancer produced. Tha isease was not common in the Fens, whereas in the neig uring county of Norfolk, where ague did not exist, and wh e pre- sumably arsenic was not taken, cancer was very nmon. Generally the meeting was slow to accept Mr. Hut nson's conclusions without further evidence, but the obs ations are none the less remarkable.

BRITISH AND FOREIGN CONSULS' REPORTS.

ITALY.

German Chemicals in Italy. A Leghorn report states that, generally speaking, the chemical industry and trade in Italy are much depressed by low prices and excessive competition between German, French, and British firms. Quite recently American makers have also commenced to compete in certain articles, especially bromides, with which they run the Germans hard. France is making vigorous efforts to regain the field which it has lost in Italy, but thus far without much success. It is expected that the new steam communication between Hamburg and the East will assist the former market in gaining ground, as it has already done last year, upon London. Firms cultivating Italian business are particularly cautioned against giving large and prolonged credits or treating directly with the insignificant and generally weak firms in the small provincial towns.

The Sumach Trade. The trade in one of the chief products of Sicily, sumach (*Rhus Coriaria*), has grown in the course of the year 1886 and is receiving increased attention. Sumach appears in the markets in England and America in the form of a more or less coarse powder packed in bags of from 50 to 60 kilos., and produced by the grinding of the twigs and leaves when dried. To France the twigs and leaves are exported while in a dried state. The powder serves both as a dye and as a mordant to fix other dyes, and for purposes of tanning. Good sumach contains from 30 to 40 per cent. of the dyeing or tanning principle. The shrub is said to have been originally transplanted from Asia; it flourishes most in high and dry soils and requires little attention after first planting. The plants when once set out will last for a century or two. For the first three years the leaves have little value, but after that time they acquire their due proportion of their peculiar quality. The plant is a low perennial shrub with long slender leaves. The harvest is made by cutting off the leaves every year, after which the plant throws forth feed shoots. Sicilian sumach, especially that about Palermo, enjoys a high reputation, as does also the sumach of Spain and Portugal. The soil of Dalmatia is also peculiarly fitted for this plant, and the cultivation of it is fostered by the Austrian Government. The largest and most luxuriant plants do not produce the greatest amount of tannin, and even in Sicily there is great difference in the quality of the powder produced from this plant. The Sicilian sumach powder is of two sorts: the best is of a rich green colour and carefully sifted; it is soft to the touch, of a rather pleasant smell and of a strong astringent taste. The second has these qualities in an inferior degree, while its colour degenerates and takes a reddish hue. The sumach grown in Continental Italy is much inferior to the Sicilian, and has a yellowish colour tending both to green and red. None of the inferior sorts are prepared with such care as the best Sicilian, and are known by the prevalence of unground fibres and minute chips indicative of less pains taken in sifting. Various adulterations are practised in preparing sumach for the market; the most obvious, that of mixing it with mineral dust can be discerned by steeping the suspected powder in water when the mineral portions will fall to the bottom. Where vegetable substances are used, chemical analysis must be resorted to.

Milan Sulphur. In Sicily the sulphur industry is in a very unsatisfactory state, causing great anxiety to the owners of sulphur mines. For the last five years the prices have been steadily decreasing; and, whereas at one time merchants insisted on a profit varying from 41 to 42 centimes, they are now only too glad to obtain a profit of four and sometimes two centimes. The reason for this is to be found in the fact that the production of the mines during the last 30 years has been excessive, and at present the annual production has been from 600,000 to 700,000 quintals over and above the ordinary consumption. The consequence is that the sulphur accumulates at the mines and at the outports, thereby causing the owners to get rid of their produce at any price. Another circumstance that has tended to depreciate the value of sulphur is that Sicilians cannot be brought to bind themselves into companies or associations; and so the opportunity of being able to close their mines for a few years until the stock is all disposed of at a fair profit is lost. The amount exported during 1886 from Palermo was 85,335 cwts., value of 15,700*l.* Nearly the whole of this was sent to the United States, with small quantities to Germany and the British Isles.

Chemicals in Sicily. The chemical products imported into Sicily consist chiefly of quinine (English and French); citrate of magnesia, chiefly from Milan; sulphuric, nitric, citric, and other acids, chiefly from Newcastle; soda in "iron drums," potash, sal-ammoniac, sulphate of copper, chloride of lime, &c. In the matter of chemical products there is now a strong competition on the part of Germany. The total value of chemical imports in 1886 was 16,868*l.*, of which 6,097*l.* only came from England.

RUSSIA.

The Trans-Caspian Railway. The Trans-Caspian Railway, which is to open up the Central Asian territories brought under Russian dominion of late years, now extends from Krasnowodsk, on the south eastern shore of the Caspian, to Chargui, north-east of Merv, at the Amu-Darya. The railway runs along the northern frontier of Persia, the principal places touched by it being Askabad, Kelat, and Merv. Till now there has been but one road to Russia for merchandise coming from Khiva, Bokhara, and Samarcand, viz., by Kazalinsk and Orenburg. The great length of this route—from 60 to 120 days—naturally acted most unfavourably on Central Asian trade, but the new railway requires only a month for goods, and but ten or twelve days for passengers. During the three years from 1883 to 1835 inclusive the Russian exports from Central Asia averaged 2,730,000 poods per year, and the imports into that region 1,300,000 poods per year, in addition to which large quantities of merchandise are carried across the Persian frontier. The new railway will not only attract and increase this commerce, but also open up the Persian provinces of Khorassan and Meshed, which will be reached *viâ* Askabad. Among the many products of this fertile region are indigo, opium, asafœtida, and other drugs. These are now brought into commerce either *viâ* Teheran and the Caucasus, or through Bender-Bushire, on the Persian Gulf. Opium and dyes are sent exclusively by the latter route.

PERSIA.

Opium Cultivation in Persia. Opium occupies the first place in the foreign trade of Persia. It insures the largest and most direct cash return to the producer, and, as a natural consequence, the area under cultivation is increasing greatly. The two principal markets are Hong Kong and London. In 1886 4,993 chests, worth 374,475*l.*, were exported from the ports in the Persian Gulf, exclusive of what was sent away by land routes or was consumed in the country itself. The quantity of morphia contained in Persian opium is 11½ to 12 per cent., while in other opium-producing countries it rarely exceeds 9½ per cent. The *Papaver somniferum*, or white poppy, of which opium is the inspissated juice, is grown principally in and about Ispahan, Yezd, and Shiraz, that of Ispahan being superior both in quality and quantity. The preparation of the land begins about September 5, and consists in ploughing, harrowing, fertilising abundantly with ashes and detritus, and laying off into squares to facilitate irrigation. After sowing, the fields are irrigated three times, at intervals of fifteen days. After that there is only one more irrigation—about the middle of the winter. In the spring, irrigation takes place on March 20, after which the land is repeatedly harrowed and hoed in order to extirpate all parasitic weeds. The plants are thinned, and then watered every ten days until flowering begins, when all work must cease. When the heads have formed and have fully ripened, a last flooding is given. Then six slight incisions are made at about the junction of the stem with the head. This should be done at noon. The juice that exudes is collected the next morning and the morning following at daybreak. When these first incisions have ceased discharging, others are made lower down, and the operation may be thus thrice repeated, the opium obtained after each successive incision being proportionately inferior in quality. Next, the plants themselves are cut down and the heads sold, the natives using the seed on bread as a substitute for butter. The end of May is the season for harvesting.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., April 5.

THE week has been a broken one so far as trade is concerned, and Mincing Lane is only just getting over the holidays at present, so that the volume of business transacted since our last report has necessarily been of a very limited character. The drug sales held to-day were limited in extent, and passed off without any considerable animation, only a very few alterations being established. The principal changes since our last report are in ipecacuanha, which is again firmer; cascara sagrada and copaiba balsam, for which more money is asked after each transaction; and cardamoms, which partially recovered the recent decline. Rhubarb, musk, senna, chamomiles, saffron, and borax are firm. Chinese cantharides and Spanish ergot of rye sold to-day at decidedly lower rates, and gamboge, kino, myrrh, and benjamin were also a little easier. Quinine is lower since last week, and acetate of lead may be purchased on slightly better terms.

ALOES.—Only 33 cases *Cape* aloes were offered to-day, and all of these except 3 were sold at unaltered prices, 22*s.* for good bright hard, 21*s.* 6*d.* to 21*s.* for more or less drossy, and 19*s.* per cwt. for dull. No *Curaçao* aloes were offered. Of *East Indian* aloes 30 kegs dark Socotrine were bought in, the price suggested being 6*l.* 10*s.* per cwt, but no offers were made. Our stock of East Indian aloes is thought to be an exceedingly heavy one, much larger, in fact, than appears in the official returns.

ANISE.—*Russian* unaltered, at from 19*s.* to 21*s.* 6*d.* per cwt., while *Spanish* is held up to 52*s.* per cwt. for the best, and good *Italian* at 40*s.* per cwt.

ANNATTO.—Still very dull. Thirty-one baskets Brazilian roll were offered at 11*d.* per lb. for hard and dark to 1*s.* 3*d.* per lb. for fair, but bought in at nominal rates in the absence of buyers; ½ cwt. fair coloured powder (probably from Java) was bought in at 9*d.* per lb. *Seeds* sold moderately well at 2½*d.* per lb. for a rather damp lot.

ARECA NUTS.—Of 100 bags clean nuts imported from Ceylon, 30 sold with some difficulty at 10*s.* per cwt., this being the lowest price which the owner was willing to take. The remainder was bought in at a nominal figure.

BALSAMS.—There has been a further improvement in the position of *Copaiba* on the Hamburg market. In Liverpool there is scarcely any stock left except a few packages in second hand, but shipments of Maranham balsam are expected shortly. At to-day's auctions 8 casks of a rather cloudy quality were bought in, 2*s.* 3*d.* per lb. being named as the lowest acceptable price. *Peru* very neglected at 4*s.* 6*d.* per lb.

BAY BERRIES.—Two bags sold at 11*s.* 6*d.* per cwt.

BORAX.—Negotiations are still pending for placing this article on a footing more satisfactory to the refiners. Meanwhile a very steady feeling prevails, although the quotations are still unchanged—30*l.* to 31*l.* per ton for English.

BUCHU.—There is nothing new to report as regards this article. Several parcels were offered for sale to-day, but the demand was almost *nil*, and only a few bales stalky yellowish long leaves sold at 2½*d.* per lb., subject to approval. For another lot of good green but very small long leaves an offer of 6*d.* per lb. was refused.

CAMPHOR.—*Crude* is very quiet, and rather weak; but English *refined* keeps up pretty well at the last quotations, viz., 1*s.* to 1*s.* 1½*d.* for flowers, 1*s.* 2*d.* per lb. for refined bells, and from 1*s.* 2½*d.* per lb. upwards for tablets.

CANTHARIDES.—A heavy decline took place to-day in *Chinese* flies, of which 23 cases ordinary quality, very broken, sold at 1*s.* 2*d.* per lb. (one lot at 1*s.* 3*d.* per lb.). Old stock of this variety must be pretty considerable. Three cases wormy *Russian* were bought in at 5*s.* 6*d.* per lb. nominally.

CARDAMOMS.—The 147 cases offered at to-day's auctions met with a pretty steady demand, and the better lots nearly recovered the recent decline, from 1*d.* to 2*d.* advance being generally paid on the last auction rates. The transactions included *Ceylon Malabar*, good plump medium to bold, but yellow, 1*s.* 11*d.*; fair but smaller ditto, 1*s.* 7*d.* to 1*s.* 9*d.*; medium long, pale, rather light, 1*s.* 6*d.* to 1*s.* 7*d*; good small yellow plump, 1*s.* 4*d.*; medium to small brown, 1*s.* 3*d.*; small and rather unsightly, 1*s.* 2*d.*; brown and spiky, to small light badly clipped, 11*d.* to 1*s.* per lb. *Mysore*, fine bold heavy, Mangalore character, 2*s.* 3*d.*; good reddish smooth pale, 1*s.* 10*d.*; medium yellow, 1*s.* 7*d.*; small to medium long palish, 1*s.* 2*d.* to 1*s.* 4*d.*; specky and brown, 1*s.*; ordinary small, 9*d.* per lb. *Seeds* sold at 1*s.* 4*d.* per lb.

CASCARA SAGRADA.—All parcels offering at the previous advance, up to 50*s.* per cwt., have been cleared from the market, and from 55*s.* to 60*s.* per cwt. is now required. The price of the bark in California is said to be equal to 40*s.* per cwt.

CHAMOMILES.—The stock continues to decrease, and prices tend higher for good *Belgian* flowers, although there is no actual change since our last report.

CINCHONA.—Several parcels, mostly of South African growth, were offered for sale to-day. Genuine *Loxa* bark is scarce, and 2*s.* per lb. is required for a tolerably good lot, while another of slightly mouldy flavour and more broken sold at 1*s.* 11*d.* per lb. Forty-two bales *Lima* bark were bought in at 3*d.* per lb. For the moment there does not seem to be much demand for this variety. Of South American *Calisaya*, 18 bales very bold but thin pieces, brown stained, were bought in at 2*s.* to 2*s.* 2*d.* per lb. Good stout flat bark is held at 2*s.* per lb., and sells at that figure privately. Ten bales weak, slightly silvery quill, from the African West Coast (Calisaya character), were bought in at 9*d.* per lb., 6*d.* being refused, while 10 cases long but thicker weak silvery *Succirubra* quill, from Ceylon, sold at 10½*d.* and 3 cases Java bark—of the same variety, but much stronger, though thinner—at 1*s.* 2*d.* per lb. It appears that, although the shipments of bark from Ceylon are constantly decreasing, the stock at Colombo is considerably in excess of the expectations, and amounted, on March 10, to 3,005,843 lbs., of which 2,284,552 lbs. were stem and root bark.

CUBEBS.—The market is rather weaker in consequence of more liberal arrivals. At to-day's auctions nine bags imported *viâ* Singapore, good genuine berries, but dusky and very stalky (they were stated to contain 22 per cent. of stalk), were bought in at 24*l.* It is said that 22*l.* per cwt. would be accepted.

CUMIN SEED.—Although our stocks are accumulating the price keeps pretty high, 50*s.* per cwt. being asked for good *Malta*. *East Indian* cumin offers at 36*s.* to 38*s.* per cwt.

DRAGONS BLOOD.—Nine cases good bright but seedy sump are offered at 7*l.* 5*s.* per cwt., an offer of 7*l.* 2*s.* 6*d.* per cwt. being refused. Two cases small and rather dark *Straits* drop were taken out.

ERGOT OF RYE.—Much lower prices than have hitherto been quoted were established at to-day's auctions. Out of a parcel of 27 packages rather small but good clean *Spanish* ergot, five sold at 1*s.* 5*d.* per lb., and this price would be accepted for the remainder. Eleven bags wormy *Russian* ergot were bought in at the nominal price of 1*s.* 8*d.* per lb.

GAMBOGE sold again cheaper to-day, several cases out of the 15 offered changing hands at 11*l.* to 11*l.* 5*s.* for broken blocky pipe of fairly good colour, and 9*l.* 5*s.* for ordinary small blocky pipe and pickings.

GENTIAN ROOT remains steady, though unaltered in price. From 17*s.* to 17*s.* 6*d.* per cwt. is quoted for partly damaged to fair root.

GUM ARABIC remains very steady. Fair small selected yellow *Turkey* gum is held at 21*l.* per cwt, and medium to bold frosty yellow selected at 24*l.* per cwt. Five bags pale and slightly amber mixed soft selected *Cape* sorts sold

at 10*s.* per cwt.; dull brown glassy at 70*s.* per cwt. Six n bales bulked *Aden* gum, small to bold mixed colours, str gly olibanum scented, sold without reserve at 5*l.* 2*s.* 6*d.*; dar r and dull ditto at 77*s.* 6*d.* per cwt.

UM BENJAMIN.—Thirty-nine cases, mostly consisting of *Su tra* gum, were offered to-day, partly without reserve, an sold at a further reduction: fair grey seconds with alm ndy centres at 8*l.* 10*s.* to 8*l.* 12*s.* 6*d.*; rather dark and sor what more false-packed ditto at 8*l.* 7*s.* 6d.; and old da grey third dark-bordered at 6*l.* 10*s.* per cwt. Brown thi s, false packed and slightly almondy, are held at 95*s.* pe wt.

UM ELEMI.—A parcel of twenty cases good fine-flavoured gu partly white, partly yellow, was offered, and of this 6 es sold at 31*s.*, and the remainder, all in one lot, at 30 er cwt.

UM KINO still tending downwards, although the 3 cases sm *Cochin* grain sold to-day at 31*s.* 6*d.* per cwt. were not of ry fine quality.

UM MYRRH sold cheaper to-day, when a rather large su ly, consisting partly of newly-imported gum, was offered fo ale. Twenty bales fairly bright Aden sorts sold at 90*s.* pe wt., while for good pale selected ditto 5*l.* 7*s.* 6*d.* was re ed. Ordinary brown pickings sold at 42*s.* to 45*s.* pe wt.

ONEY.—Only a small lot of 44 cases *Californian* honey of du candied quality was shown to-day, and bought in at 40*s.* pe cwt. Shipments of *Chilian* honey continue to arrive he.

SECT FLOWERS have declined in price since our last re rt, the quotations "c.i.f. Trieste" being now 190*s.* for open, 19 . for half-open, and 204*s.* per cwt. for closed flowers. It w thus be seen that only the latter have maintained their pr .

PECACUANHA.—It is said that 8*s.* 6*d.* per lb. has been p priv tely for good stout root, which would mark a fu er considerable advance, but at the auctions only 4 ba s selected root were offered, and all bought in at 10*s.* per lb Our stock is very small, and is believed in well-informed q ters not to exceed 18 serons.

ALAP sells very steadily at 6¼*d.* for sound very small n ed, and 6*d.* for slightly-damaged Vera Cruz.

OLA NUTS.—The demand has apparently been nearly sa fied for the present, and, although holders would accept v y low rates, there is not much business doing, only 3 p kages very mouldy Kolas selling, "without reserve," at 1 . per lb.

EAD ACETATE is lower, at 27*s.* to 28*s.* per cwt. for *foreign* w te, and up to 44*s.* per cwt. for chemically pure.

MATICO.—A fresh consignment of 10 bales arrived yester- d from Valparaiso. At to-day's auctions one bale dusty a broken, slightly damaged leaves, was taken out.

MUSK.—Several cases have come to hand since our last r ort. The assortment offered to-day was a moderately e ensive one, but only a few caddies were sold, there being r her an absence of importation. What was sold realised f ly steady prices. Of *Tonquin* musk four caddies first pile, s all to bold pods, blue skin and underskin, fairly dry and w ll trimmed, were bought in at 95*s.* per oz., while of a less d irable parcel, rather small and damp pods, two caddies s d at 89*s.* to 90*s.* per oz. One tin very dry small hard n nan-shaped pods sold at 45*s.* per oz. Good third pile, v rious, but well trimmed, though very damp pods brought 3*s.* 6*d.* per oz.; for common dark damp pods 28*s.* was refused, w ile another lot sold at from 27*s.* to 28*s.* 6*d.* per oz. *Trimmings* b ught 1*s.* per oz. *Cabardine* China, medium, nicely- tr mmed pods, thin skin but damp, is held at 38*s.*, an offer of 3*s.* being refused. Russian, fine bold trimmed pods, bought at 50*s.* per oz.; fair, ordinary juicy, at 17*s.* 6*d.* to 20*s.* per oz. *Grain* sold, "without reserve," at from 4*s.* to 36*s.* per oz.

MUSK SEED.—57 bags dull seed of weak flavour, sent here fr m Holland, were sold at 3½*d.* per lb.

MERCURIALS.—The following are the present quotations of the makers:—*Corrosive sublimate*, 2*s.* 5*d.* per lb.; *White precipitate*, 3*s.* 3*d.* per lb.; *Red ditto*, 3*s.* 4*d.* per lb.; *Calomel*, 3*s.* 2*d.* per lb.; *Mercurial ointment*, 1*s.* 11*d.*; *Blue pill*, 2*s.*; *Mercury and chalk*, 1*s.* 1*d.* per lb.

NUX VOMICA.—Holders seem to remain very firm. We hear that for the 30 bags bought in at the last auctions 16*s.* per cwt. has since been offered privately and refused, the limit placed on the seed from India being 18*s.* To-day 203 bags small silky *Cochin* seed were all withdrawn. Twenty bags small *Bombay* sold at 12*s.* 6*d.* for sound and 4*s.* 6*d.* for damaged.

OIL (ALMOND).—Two cases sweet Italian oil were offered for sale, but bought in at 8*d.* per lb., there being no offers. English expressed oil is held at 1*s.* 3*d.* per lb.

OILS (ESSENTIAL).—*Almond* tending dearer, at 24*s.* for ordinary English distilled, and 29*s.* for oil free from prussic acid. *Star anise* quiet. Three cases unworked bought in at 6*s.* 6*d.* per lb. For good bright new *Cinnamon leaf* oil 1¼*d.* would be taken. *Cinnamon* oil sold at 1*s.* 3*d.* per oz. for fairly good pale. *Otto of Rose* is very firm. Two cases *patchouly* oil are limited at 2*s.* per oz. In American *peppermint* oil (H. G. H.) a pretty steady trade is reported, and 10*s.* 6*d.* per lb. is quoted.

ORANGE PEEL.—Heavy quantities are depressing the market, and only a few lots were sold to-day, at 1*s.* 2*d.* per lb. for fairly good bright thin cut *Malta*.

PATCHOULY LEAVES.—Twelve bales were shown. For dull musty but not stalky leaves 4*d.* per lb. was refused, the holder buying in at 9*d.* per lb.

QUICKSILVER.—Without much alteration. Business is doing at 7*l.* 12*s.* 6*d.* from the second hand.

QUININE.—Very little business is doing, and a very weak feeling prevails, although, perhaps, speculative moves have something to do with the decline which is quoted on last week's prices. *Howard's* and *Pelletier's* quotations remain unaltered, but the *German* and *Italian* makers offer at 1*s.* 8*d.* to 1*s.* 8½*d.* per oz. on the spot or forward. At the auctions 1,000 1-oz. bottles of Howard's quinine were bought in at 2*s.* 4*d.* per oz. (2*s.* being apparently offered); twenty 25-oz. tins were also catalogued, but only up to 1*s.* 10½*d.* per oz. was bid, so the lot was bought in at 2*s.* 2*d.* per oz. Another parcel of 1,000 1-oz. *Pelletier's* in bulk was also bought in at 2*s.* 1*d.* per oz. nominally.

RHUBARB.—Of the 92 cases offered to-day only a small quantity sold, at very steady, if not dearer, prices; *Shensi*, medium to small flat, fair coated, slightly horny, three-fourths pinky fracture, 1*s.* 6*d.* per lb.; *High-dried*, medium to bold, 9*d.* to 9½*d.* per lb.; small at 8*d.* per lb.

SAFFRON remains exceedingly firm, and 50*s.* per lb. is now quoted for fine *Valencia*.

SARSAPARILLA.—Thirty-three bales *Mexican*, good clean, free from chump, done up in bundles, sold at 6½*d.* for sound, and from 3½*d.* to 6*d.* for damaged root. A parcel of 6 bales East Indian sarsaparilla (from *Hemidesmus indicus*), brown were offered at to-day's auctions, and sold at 9*d.* to 9¼*d.* per lb. It is said that no such root has been offered for public sale since 1876. The root appears in long pieces, of the thickness of a quill, the colour externally being either bright coppery or mauve-black. The bark, apart from this, has a characteristic appearance, being divided, at distances of an inch or so, by natural incisions round the circumference, and the divisions have a leathery appearance. The inner portion of the root is tough and fibrous, and not at all starchy. The odour of this parcel is somewhat like coumarin. It was imported *viâ* Marseilles.

SENEGA.—The feeling in the market appears a shade less firm. At to-day's auctions an offer of 1*s.* 10*d.* per lb. was made for a parcel of fairly bright colour and good flavour, but rather chumpy, and one of 1*s.* 8*d.* per lb. for a dark, thin and very chumpy lot. It was stated that these offers would be submitted.

SENNA.—173 packages, the bulk second-hand parcels, were offered to-day, and partly sold at very high, and occasionally slightly dearer, rates; 1¼*d.* to 2*d.* for dark and thin yellowish, and 2¼*d.* to 3¼*d.* for fair to fairly good greenish leaves.

SQUILLS.—Ten bags good pale dry sold at 4*d.* per lb.; a darker lot is held at 3*d.* per lb.

TEA.—The China market opened on Thursday after the holidays with usual Thursday sale of Congous, greens, and scented teas. Common Saryunes fetched 3¾*d.*; useful common Soomoos and Saryunes, 4¼*d.* to 4½*d.*; and boxes packling—common tea—cheap at 4*d.* and a fraction. Boxes Moning at 5½*d.* showed good value, as did useful Souchongs at 5¾*d.* and 5½*d.*—these sorts probably never having been cheaper, owing mainly to small shipping demand. Greens and scenteds sold steadily at about previous rates. The only sign of life in the Assam market has been a small catalogue of about a score of breaks, sold without alteration. Otherwise the Assam and Ceylon market is practically unopened till Monday.

TONQUIN BEANS.—Of eight cases Pará beans, three sold, dark at 1*s.* 8*d.* to 1*s.* 9*d.*; the rest was bought in at 2*s.* for small dark to 1*l.* 3*d.* per lb. for common foxy.

NOTES ON ESSENTIAL OILS.

(*From Messrs. Schimmel & Co.'s Half-yearly Circular.*)

SINCE last autumn, Messrs. Schimmel & Co. state, the trade in essential oils has been of a fairly satisfactory character, although not an exceptionally favourable one. The increased stringency of the protective duties, and the tariff-wars which have lately marked the commercial policy of Continental states, have adversely affected the export business of the Leipzig firm, and the sale of essential oils to liqueur manufacturers in Germany has been greatly hampered by the Spirit Law, which has had the effect of disorganising the liqueur industry, and of decreasing its output to the estimated extent of 25 to 30 per cent. The perfumery trade has apparently suffered no injury through the action of the new law, although its provisions with regard to the official control and inspection of the stock of alcohol in the hands of manufacturers are exceedingly irksome.

ANISE OIL.—The bulk of last autumn's arrivals of Russian anise were of a satisfactory quality, being of good colour and clean. It would therefore seem as if the disagreeable experience of the Moscow agents in former seasons has not been without good results. The cheap prices prevailing, and the low standard of the Rouble value brought about an exceptionally heavy business in Russian seed, which was further stimulated by the total failure of the crop in Spain, which, in good years, exports from 500 to 600 tons of anise, but must have shipped considerably less last season.

BOLDO OIL.—This oil is a novelty, and is now brought into commerce for the first time. It is distilled from the leaves of the *Boldoa fragrans* (Gay), which is one of the principal plants indigenous in Chili. Freshly-imported leaves yield fully 2 per cent. oil, possessing a pepper-like narcotic odour of the leaves in a highly concentrated degree, and having a mild, almost neutral, herb-like taste. Its specific gravity is 0·918, it boils at 175° to 250°, and contains terpene ($C_{10}H_{16}$), as well as oxygenous constituents. The oil is used in affections of the liver, and has recently been administered in gonorrhœa, dyspepsia, and rheuma.

CANANGA OIL.—Owing to the low prices of Ylang-ylang, the interest shown in the marketable varieties of cananga oil, from Java and Siam, has been very restricted. During the process of rectification of a quantity of this oil Messrs. Schimmel & Co. obtained from the residue a magnificent benzoic acid, which is present in cananga as well as in Ylang-ylang, probably in an ethereal form. It is, therefore, not improbable that sooner or later the synthesis of these oils will be found. Hitherto the high prices of the material may have stood in the way of researches in this direction.

CINNAMON OIL.—In Colombo higher prices are now asked. The bulk of the exports from that island consists of bitter, low-class oils, or of cinnamon-leaf oil, only a small percentage of the shipments being of fine and pure quality. The most practical and certain test of the purity of cinnamon oil, and one which is preferable to all chemical tests, consists in simply pouring a few drops into cold water, when cinnamon oil sinks, as its specific gravity is higher than that of water. When touched with the tongue, pure oil immediately creates an extremely sweet taste, far surpassing that of sugar. This purely sweet taste should be maintained throughout. Ordinary oils first cause a clove-like taste, which is only succeeded by sweetness after a long interval. Such oil has no higher value than ordinary oil of cassia.

CLOVE OIL.—Until now only small shipments have come to hand of the clove oil distilled in Mauritius from green cloves. This oil, though it is said to answer the requirements of a good quality of clove oil, is of a very low specific gravity (1·048 at 18° C.), against 1·060 s.g. at the same temperature for clove oil distilled by Schimmel & Co.

GERANIUM OIL.—In October last the price of African geranium advanced by about 10 per cent., and this increase has been fully maintained for the better brands. The stock of the latter is now much reduced, and the future course of the quotation will depend upon the yield of the first crop, which is distilled in the month of April. It is worthy of note that freshly-distilled African oil, if exported in tins, nearly always has a pronounced disagreeable flavour when first opened, but this is quickly lost when the oil is decanted in bottles and brought in contact with the air. Quite recently the quotations for fine Spanish oil have been somewhat reduced. It is proposed to establish in the south of Spain a large distillery, fitted on the French plan, especially with the object of producing oil of geranium. There is no doubt that, in case of only a small difference in price, Spanish oil deserves the preference over the African product. The production of geranium oil in Corsica does not appear to have gained much ground.

GINGER OIL.—Cheap ginger for distilling purposes has been obtainable in abundance, African ginger especially being frequently obtainable at very advantageous prices in Liverpool and Hamburg. In China, whence hitherto only preserved ginger has been exported, a company has recently been formed which treats the root by special machinery and dries it for export. It is said that no less than 90 per cent. of the weight of the fresh root is extracted in the form of water and starch, while the remaining 10 per cent., which is obtained in a powdered form, contains the valuable aromatic part of the root. A sample of the powder proved far superior in aroma to all known varieties of root, and the first large trial shipments of this powdered root are looked forward to with much interest.

LEMON OIL.—The prices of the new oil in Sicily ruled at an advance on those paid for old oil at the close of the season, and owing to heavy and pressing orders from America a large proportion of the crop changed hands at full prices since the beginning of the year. Recently business has become rather slacker, and a decline in the value may not improbably occur with the advent of warmer weather. One of the principal manufacturers is steadily engaged in elaborating a machine for the manufacture of oil of lemon, and the complete solution of this problem appears likely to be realised soon. This would do away with the now largely prevailing sophistication of the oil during the process of squeezing it from the rind by hand. According to official Italian statistical returns the number of lemon, bergamot and orange trees in Sicily is 10,115,796, and in the province of Reggio 4,211,377, yielding in 1885 a total of 2,329,600 fruits, a quantity much below the average. About 500 fruits are required for the manufacture of one kilo of essential oil.

LIGNALOES OIL.—The production of this oil in Mexico has been increased to a perfectly senseless degree, considering the limited consumption, and consignments upon consignments are accumulating on the European markets. Under these circumstances values have steadily fallen, without thereby enlarging the use of the oil to any considerable extent, and the exporters will have to prepare themselves for heavy losses. The principal employment of oil of lignaloes is in the manufacture of a perfume which has already gone more or less out of fashion, and thus the field for consumption has shrunk, while the production has increased tenfold.

MATSU OIL.—This oil, which is a novelty imported from Japan, is probably obtained by distilling the tar of a variety of birch or beech-tree. The oil is quite different from that yielded by the German birch-tree. The latter has a sp. gr. of 0·965, and contains about 40 per cent. of phenol derivatives. The part which is insoluble in alkali boils at 170° to 238° (between 170° and 200° about 20 per cent.) The s.g. of the Japanese oil is 0·875, and it contains 4 per cent. of phenol of an agreeable guayacol flavour. The bulk of the part insoluble

ir lkali boils below 180°, viz., about 40 per cent. between 1[illegible] and 170°, and 40 per cent. between 170° and 180°, only a[illegible]t 10 per cent. requiring a temperature of over 200°. The lc boiling parts of the oil would probably be worth a careful c[illegible]nical investigation.

EROLI OIL.—The expectations that the frosts which have o[illegible]rred in Southern France have damaged the orange-trees h[illegible]e not been realised. It is stated from a reliable quarter th[illegible] although the temperature has been as low, if not lower th[illegible]n in 1883, yet no evil effects of the frost are noticeable, a[illegible]he young buds were not yet sufficiently developed to be d[illegible]aged. Only quite young plants, which do not yet bear f[illegible]t, and sweet oranges have suffered, and a normal result o[illegible]he neroli crop may therefore be anticipated. The prices u[illegible]n which the flower contracts have been based are the s[illegible]e as last year.

ETITGRAIN OIL.—The high prices which were realised b[illegible]fine Paraguay oil a year ago have, unfortunately, brought a[illegible]ut over-production, which, in a short space of time, has t[illegible]roughly ruined the trade in this oil, and quotations have [illegible]v fallen to a point which can scarcely leave a margin to t[illegible] manufacturer. The consumptive capacity of the market f[illegible]this article, it should be recollected, is strictly limited, a[illegible] any transgression beyond its boundaries usually avenges i[illegible]lf. The manufacture of the oil, also, is no longer confined t[illegible]a few persons, as it used to be, but quite a number of p[illegible]ple, mostly new to the business, are engaged in it, and are i[illegible]he habit of consigning their goods, on good luck, to the f[illegible]t European market they can think of. The formerly-p[illegible]ctised adulteration of the oil with alcohol does not seem t[illegible]e resorted to any longer, and, on the whole, laudable care [illegible]now given to the preparation of the article. The competing [illegible]nch oil, of course, suffers greatly from the glut in the [illegible]rket.

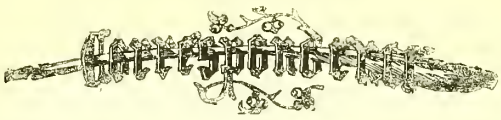
ROSE OIL.—The plantations of centifolia roses in Germany [illegible]y show to a very slight extent the damage caused by the [illegible]ere winter, and the loss is comparatively no larger than [illegible]former years. A few hundred rose plants of the variety [illegible]tivated in Bulgaria have reached Leipzig by a détour, and [illegible]h expectations are formed of their successful propagation. [illegible]ey will flower in the coming season, and it may then be [illegible]lged whether they will serve the purpose better than the [illegible]ntifolia plants. The cultivation of roses for distilling pur-[illegible]ses can of course only be resorted to with advantage in [illegible]e immediate vicinity of Leipzig, so that the freshly-[illegible]thered roses can be at once forwarded to the works in [illegible]e morning. Meanwhile, however, the price of otto of rose [illegible]s fallen so low that the German distilled otto, although in [illegible]mmerce it commands a higher price than the Turkish [illegible]icle, does not leave a profit to the distillers. German rose [illegible] will be exhibited for the first time at Brussels and Barce-[illegible]a this year. The cause of the extraordinary depreciation [illegible] the Turkish oil is generally said to lie in the fact that the [illegible]evailing fashion is not favourably disposed towards the [illegible]ticle, and that the enormous extent to which adulteration [illegible] resorted to has made people lose confidence in the article. [illegible] no improvement should occur in this respect the future of [illegible]e article may almost be despaired of, for if a favourable [illegible]op should come to reinforce the stock left over from pre-[illegible]ous seasons, the accumulation of supplies must further [illegible]press the price, and even threaten the continued existence [illegible] the Bulgarian industry on its present scale.

WINTERGREEN OIL.—During the past half-year prices [illegible]ave only slightly varied in America, and they now again [illegible]pproach the lowest quotations of the latter end of 1886. [illegible]he action of gaultheria oil has recently been investigated [illegible]y H. Wood and H. A. Harl. They found that large doses [illegible]aused violent irritation of the mucous membrane of the [illegible]omach and severe vomiting, bnt no diarrhœa. Paralysis [illegible] the heart only occurred after the injection into the blood [illegible] very large doses, and in this respect the effects were weak [illegible]s compared to that of other liquid oils. It is surmised that [illegible]he oil is entirely changed to salicylic acid in the body, as all [illegible]ttempts to prove its presence in the urine were fruitless. [illegible]he statement made by MacEwan, to the effect that winter-[illegible]reen oil is very largely adulterated with camphor oil, seemed [illegible]o improbable to Messrs. Schimmel & Co. that they made [illegible]nquiries on the subject in New York, and received the [illegible]nswer that their New York firm had never met with any [illegible]uch adulteration within their experience.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of the principal drugs in the Port of London on March 31, 1888, and to the imports and deliveries from January 1 to March 31, as compared with the preceding year:—

Article	Stocks		Imported		Delivered	
	1888	1887	1888	1887	1888	1887
Aloes .....cs	4,540	4,711	709	1,186	1,380	1,505
„ .....kegs	3	10	—	1	4	3
„ .....gourds	4,330	—	98	—	397	10
Anise, Star .. chts	176	317	25	117	30	39
Arrowroot ....cks	12,861	11,781	3,559	3,374	3,661	3,466
„ bxs & tins	7,701	6,856	1,441	3,706	1,786	1,355
Balsams ..cks, &c.	431	508	35	53	213	236
Bark, Medicinal cks & cs	12,930	7,859	6,915	8,484	5,969	8,498
„ srns, &c.	46,203	52,952	9,385	12,442	10,554	13,969
Borax.....pkgs	487	1,283	—	582	—	398
Calumba .... „	2,389	1,516	54	219	463	230
Camphor .... „	3,000	5,136	2,673	1,894	1,651	2,934
Cardamoms ..chts	1,005	832	816	1,249	534	1,043
Cocc. Ind. bgs, & ..	265	430	—	10	21	20
Cream of Tartar cks	13	11	—	5	—	5
Cubebs.....bgs	29	97	22	127	106	122
Dragon's Blood chts	98	152	49	60	50	44
Galls, China, &c. cs	7,562	3,352	7,207	1,727	1,329	966
Trky & Prsn sks	2,832	4,996	1,973	2,079	2,111	1,014
Gum—						
Ammoniac pkgs	206	201	5	65	35	53
Animi & Copal pkgs	4,334	4,858	2,709	1,331	2,789	2,709
Arabic..... „	11,960	13,477	6,076	3,738	3,391	5,636
Asafœtida.. „	463	696	125	—	112	81
Benjamin .. „	1,532	1,618	858	546	837	493
Damar .... „	3 313	5,213	1,177	677	1,286	1,319
Galbanum.. „	—	9	—	1	—	1
Gamboge .. „	134	103	68	83	43	87
Guaiacum .. „	53	70	3	30	29	10
Kino ..... „	124	91	60	8	12	28
Kowrie ....tons	672	436	741	229	570	508
Mastic ....pkgs	121	136	23	4	7	9
Myrrh..... „	455	338	68	204	141	163
Olibanum .. „	6,003	3,906	3,149	1,617	1,130	1,338
Sandarac .. „	1,474	1,316	752	584	327	515
Tragacanth „	4,750	966	4,300	862	1,454	500
Indiarubber, E.I. tons	307	75	135	79	82	123
Madagascar.. „	52	7	47	22	19	24
S. American ..„	123	57	79	66	72	45
African, &c... „	694	252	443	155	248	206
Total	1,179	391	704	322	421	398
Indigo, East Indian chts	15,392	16,525	11,358	10,675	4,263	4,782
„ Spanish srns	5,931	4,121	3,593	3,931	1,690	1,501
Ipecac. casks & bags	18	30	34	104	189	145
Jalap .....bls	163	139	25	—	8	23
Lac Dye .....chts	6,920	7,806	—	—	246	37
Myrabolans ..tns	9,205	9,205	2,404	4,236	3,743	2,993
Nux Vomica pkgs	334	527	248	112	460	284
Oils—						
Anise .....cs	56	140	60	25	56	60
Cassia ..... „	165	90	64	50	62	59
Castor .....cks	794	600	148	255	246	253
„ .....cs	10,474	5 503	5,671	1,351	2,715	2,287
Cocoa-nut....tns	2,227	1,943	1,418	1,517	1,007	876
Olive ..cks, &c.	1,157	1,037	995	1,466	515	1,209
Palm .....tns	263	204	85	51	30	27
Opium ..chts, &c.	1,826	1,967	145	531	424	671
Rhubarb.....chts	1,003	1,523	275	236	406	564
Safflower .....pkgs	208	308	—	76	179	154
Sarsaparilla ....bls	562	532	431	468	290	391
Senna .... bls, &c.	1,942	977	697	1,133	1,261	1,018
Shellac, Orange chts, &c.	48,790	38.064	14,188	8,495	7,390	7,277
Garnet.. „	18 887	13.006	5.270	2 833	1,561	1,438
Button.. „	11.250	11,034	2,172	1,999	2,040	2,473
Total ..chests	78,927	62.104	21,630	13,327	10,994	11,188
Sticklac ..chts, &c.	4,431	4,366	524	313	484	156
Gambier .....tns	1,872	2,016	2,938	3,6 1	2,957	3,242
Cutch ..... „	2,172	1,205	1,879	635	650	768
Turmeric .... „	3.496	2,038	1,102	559	240	437
Vermilion, chts, &c	46	17	12	1	29	38
Wax, bees' ..bls & srns	697	1,000	53	175	169	346
„ cks & cs	1.654	1,288	648	705	748	752
„ cakes	42	100	24	11	—	—
Wax, Japan...pkgs	1,861	1,366	1,274	389	325	380



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

The Pharmacy Bill.

Homo, who describes himself as "another of the unfortunates," sends particulars of his history with the view of showing that the branch shop clause would act unfairly in his case. He had been four years an apprentice when the Pharmacy Act passed in 1868, and he did not go in for the examination then because he thought of leaving the drug trade. He has remained in the trade, however, and for fourteen years has managed a busy retail. "If the clause should become law," he remarks, "it will make any young man over twenty-one, who has passed the Minor, cligible for the post of manager, whilst I, and such as I, must take a 'back seat,' though we have for years filled our posts satisfactorily. I do not wish to depreciate the examinations, but every practical man knows that they do not take the place of experience, and that many examined men could not conduct a business creditably. If this view of the matter were placed before the promoters of the Bill, I think they would see it reasonable that some clause should be introduced for the benefit of those who have been in the trade so long. To give such men the opportunity of passing a modified examination would only be acting up to the golden rule, and would not be an injustice to younger men who had passed the Minor, as they knew what was expected of them when they entered the trade."

SIR,—Now that the Pharmacy Acts Amendment Bill is before Parliament, a clause to exempt chemists and druggists from jury service might with advantage be added.

The present system, which exempts "pharmaceutical" chemists only, is manifestly anomalous and absurd, for there is no practical difference between the position which they occupy relative to the public and that occupied by the ordinary chemist and druggist.

There are many chemists who are compelled to conduct their businesses without any assistance, and who are consequently obliged to close their establishments when called away to do duty as jurymen. This may, and I believe does, happen when there is only one chemist in a neighbourhood, and is therefore a source of inconvenience to the public, to say nothing of the chemist, or his pecuniary loss, which may be considerable. Yours respectfully,

H. C. DADSON.

Mr. John Morris (Coventry) writes to express the hope that when the clause becomes law it will be most rigidly enforced. He does not see why the unqualified manager should have easier terms than other candidates have had.

SIR,—I fully sympathise with "A Sufferer." In addition to the points he speaks of and the hardship to qualified chemists in business, there is another phase of the question. In country districts and small towns an unqualified man sells pretty much what he likes. A late assistant of mine told me recently that a certain non-qualified friend of his had every scheduled poison in his establishment, and my recent experiences seem to prove a similar state of affairs in my own. An ex-manager, well known in the town, opens a shop and advertises in the local papers, "A. B, late assistant to D. (chemist and druggist), has opened the shop, E. F., with an entire new stock of drugs, chemicals, and patent medicines, &c." I believe this individual sells poisons just when it suits him. The other night, happening to be open a little later than A. B., in came a boy for 3*d*. of chlorodyne. The bottle had evidently had it in before, and yet it had a blank label with A. B.'s name and address, but no name of article or person. Directly after came another for landannm. This was one of our old customers who had a small account, so went to A. B. In this case I have no doubt it has been purchased more every day for the last two or three weeks, my name and address being left on the bottle. My reason for writing is to see if something cannot be done with cases like those quoted. In one instance the poison is sold to the public danger and in the other the qualified man is practically answerable for the poison sold by the non-qualified. Many would say why not take some steps against these people? but it would be a very difficult matter, because they know most of their customers, and if a stranger were to ask for a poison they would simply say they had not got it. Besides, in working class neighbourhoods there would be a deal of sympathy with the prosecuted, and the prosecutor would be looked upon with disfavonr. I shonld think if a clause could be inserted in the Amendment Bill giving certain authorities the right to search the premises of unqualified men (the same being licensed), that might meet such cases, and I shall be glad if you could tell me who will have charge of the Act in the Commons, and I will lay this matter before them.

Yours truly,

ROCHESTER.

[Sir Henry Roscoe has introduced the Bill into the House of Commons.]

SIR,—Would it not be possible for the Pharmaceutical Society to get inserted in the Bill now nnder discussion a clause to the effect that it shall be unlawful for any person not registered under the Pharmacy Act to sell any drugs intended for the relief or cnre of hnman disorders? This would but be putting the chemist in his proper place; at present as he is obliged to pass an examination in other articles than poisons, why should the few poisons that are enumerated in the Act be the only things the general dealer is prevented from selling?

I would even go further, and abolish the patent-medicine stamp, and make all chemists pay an annual licence according to their rental. This, perhaps, wonld be thought a first a hardship by some chemists, but we should certainly escape the worries consequent upon the visits of the Inland Revenue official.

Certainly at the present time, and under existing conditions, no class of men or traders has such vexatious worries to contend against; none have snch continnal pain worry; none run such great risks with so little commensurate advantage; and none stand such a poor chance of making a decent livelihood as the

April 4. POOR CHEMIST. (32/3)

Miscellaneous Wants.

SIR,—For next DIARY, may I suggest a pronouncing vocabulary of the principal new scientific words, with their meanings? I think some among your readers are in doubt about meaning and pronunciation; for instance, as to whether "microbe" is mi-crobe or mi-cro-bee.

In reference to the Medicine Stamp Act, could not pharmaceutical and registered chemists bring about an Act which would give them some vantage grennd, viz., that one's own preparations, sold on their own premises, shonld be exempt from tho stamp, but if sold otherwise then stamped in the usual way?

It certainly does seem hard, as things now are, that we may not call our preparations by our own name, or even expose them for sale, without being subject to the stamp.

I do not think any chemist conld object to this, and a petition signed by everyone of this opinion should produce some result. If a body of girls could carry their point

ıe threatened match tax, surely we might manage some-ıing to put us in a little better position than we now are.

In reference to improved forms of apparatus, why should ot Wedgewood funnels be made with a rim or lip at the top, ı that a piece of muslin or straining cloth could be easily ed? it would save a few anathemas, and should not add to ıe cost. Measures might be made with opposite lips. veryone knows it is sometimes convenient to put a measure ıt of the left hand on to a shelf or ledge; of course, as then t down, it is the wrong way for pouring with the right ınd, which would be obviated by the other lip.

CORRESPONDENT. (29/49.)

DISPENSING NOTES.

[*The opinions of practical readers are invited on subjects ıussed under this heading.*]

Pill Ideas.

SIR,—Some years ago, when I was an assistant, I found I ould finish off pills with greater facility with an ordinary ng pound-weight than with the usual pill finisher of wood, ıd from that time up to the present have not altered my ıethod.

I do not know if there is such a thing as a metal pill nisher, but my experience is that it has an advantage over ıe wooden one, for the reason that it can be made warm, ıd will retain the heat for a considerable time. Hard pills hich have "fallen" will readily become amenable to the armth and weight. Stock pills assume a hard and durable ature much quicker. I have found a refractory mass worked ith a cold machine and finisher often become more so, hile with a well-warmed pill machine and finisher the same ıass will become quite tractable. Possibly the temperature f the pill-machine slab is not sufficiently taken into account ı rolling out pills. I give this suggestion, as I believe it ıay sometimes help to expedite work and lighten labour.

Yours truly,

METAL. (24/49.)

Tincture of Quinine in Mixture.

SIR,—I recently had the following prescription to dis-ense—

Potas. bromidi	ʒiij.
Tinct. quininæ	ʒiss.
Aq. destil. ad	℥vj.

On adding the tincture of quinine to the bromide dissolved ı part of the water, a precipitate gradually formed. Think-ng the precipitate quite legitimate, I sent it out—as I sup-osed other chemists would have done—as it was. It was, owever, returned by the patient, who stated that it had een dispensed by several other chemists, and had always een obtained bright. My mixture contained a deposit, part dhering to the sides of the bottle, and giving the mixture a irty appearance. Should such a mixture be filtered or not? t appears to me that filtering would impair the medicinal alue of the mixture, since part of the quinine, in the form f bromides, would be removed.

Yours faithfully,

OMEGA. (26/38.)

[We fail on experiment to get results corroborative of Omega's" difficulty. The mixture is not transparent, but should not contain a precipitate of quinine. Perhaps Omega" has used tap-water.]

LEGAL QUERIES.

26/53. *A. M. R.*—We do not understand what you want o know. How can we possibly tell whether you have kept lear of all Government interference?

27/51. *Free Hall.*—There is nothing in the regulations of he Incorporated Law Society, or in those of the Institute of Chartered Accountants, which would entitle a candidate who ıas passed the Pharmaceutical Preliminary to be excused rom the preliminary examination for solicitors or chartered accountants. Any further question respecting those institutions should be addressed to the secretaries.

24/63. *Mag. Sulph.* asks: "If Mr. Blank, of Dull Town, by deed of gift assigns to me all his interest in his proprietary pills, free of all debts and liabilities, together with the right to use his name, do I become liable for the debts he has contracted in advertising his said pills?"

[The assignee does not become liable for the debts the assignor has contracted for advertising, but the creditors might, no doubt, under certain circumstances, succeed in setting aside the deed as fraudulent under the statute of 13 Elizabeth, cap. 5.]

29/74. *Enquirer.*—If the Pharmacy Bill should pass this year, any one could pass the qualifying examination without going through a curriculum any time up to the end of 1892. See the end of Clause 2.

31/29. *Pembroke Dock.*—We presume that the cases you refer to in the Dentists' Register, wherein registration of persons in practice before July 22, 1878, is given at a later date than 1879, merely show that the registration was not completed until the date named. Clause 7 of the Act provided only that the necessary information should be furnished before August 1, 1879. For further information inquire of the registrar.

30/27. *W. M.*—To register a fancy title you must make application on a form which you can get either at the Post Office or from the Trade Marks Office, Southampton Buildings, London, W.C. You will pay 5*s.* on application, and if the title has been registered previously your application will be rejected and your 5*s.* lost. A search at the above office in any one class costs 1*s.* If your application be accepted you will have to pay another 20*s.* for registration. Other expenses would follow if any one should oppose your registration.

8/194. *D. D.* writes in reference to the title "dental mechanician," which we stated last week had been adopted "to avoid future unpleasantness" by a chemist at Wisbech who had formerly been fined under the Dentists Act. It was assumed that the assumption of the title "dental mechanician" would not infringe the Act. "D. D." thinks it would be a name, title, addition, or description implying that the user is registered under that Act. His opinion, he says, has been confirmed by Haydon's Defence Agency. We should think it very likely that there might be a prosecution, but we doubt very much whether any sane court would find that this title was an infringement. If so, we should say "medical rubber" ought to be an infringement of the Medical Act.

24/63. *Mag. Sulph.* writes:—"Blank's creditors have discovered that he and his son bank together in their joint names as 'Blank & Son.' The son is an engineer, and Blank is a chemist. Can this account be attached by Blank the elder's creditors?"

[It was decided by the Court of Appeal in the case of Macdonald *v.* The Tacquah Gold Mining Company, 13, Q. B. D., 535, that a debt due to the judgment debtor and another jointly could not be attached. The case above mentioned seems to be covered by this decision.]

MISCELLANEOUS INQUIRIES.

30/32. *Perplexed.*—Your letter does not affect our reply, which applies to "burnt sugar" and "caramel" (synonymous trade names). To get a case against the suppliers, you must prove to the satisfaction of a judge that the article with which you were supplied differs materially from what is generally known as "burnt sugar," and that in consequence of using the same you have suffered loss. Our examination of the sample does not justify us in advising you to proceed against the house.

30/14. *Arbeitsam.*—**Sulphurous-acid Gas** is made on the large scale by heating a mixture of coke, sulphuric acid, and water. Bisulphite of lime solution is made by passing the gas through milk of lime.

30/63. *Tyro.*—See note by "Wilkan," on page 331.

30/46. *Nimbus.*—The Government publishers (Messrs. Eyre & Spottiswoode, New Street Square, E.C.) annually publish the questions set in all the subjects of the Science and Art examinations.

30/54. *J. M.*—**Plaster of Paris Bandages.**—These are made from the muslin known as crinolinette, which should be in strips 3 inches broad (less or more according to the part to which the bandage is to be applied). Roll the bandage in the ordinary way; have a supply of plaster of Paris placed on a sheet of brown paper; unroll the bandage bit by bit, rubbing in the plaster with the hand, re rolling as the muslin is charged with the plaster. In vol. xxx. page 479, you will find an illustration and description of a machine which performs the work in an effective way.

Ink for Ticket Writing—*Toboggan* (Montreal) writes: "In answer to your correspondent 'Tulip,' March 3, 1888, for an ink for ticket writing, we have used the following for a long time, viz.:—Asphaltum 1 part, and turpentine 5 parts; dissolve the asphaltum in the turpentine, and it is ready for use. It makes a shining mark, and dries in a few minutes. If it gets too thick add more turpentine."

28/68. *Joseph* has several gallons of thick olive oil (a sediment from a large cistern) and wishes to know how to make it into **Soft Soap.** Dissolve 20 lbs. of caustic potash in 3½ gallons of water and let stand until cold. Place 8½ gallons of the oil in a suitable vessel and pour the lye into it in a thin stream, stirring all the while with a wooden stirrer about 3 inches broad, and continue to stir until the lye and oil are thoroughly mixed and of the appearance of honey. Set aside in a warm place for a day, then stir again, and after a few days the soap will be ready for use. If it is to be sold it requires the addition of a fifth or fourth of its weight of water, as it is rather stiff.

25/37. *Cocaine Hydrochlor.*—Thanks for yours. Such cases as that mentioned frequently happen, and it is best to consult the physician, as you did, when that is possible.

24/55. *Alpha* wishes to know if pure **Stetine Colza Oil** has any special mark on cask to show that it is such.

27/68. *Hotspur.*—The formula given on page 442 (22/50) of last week's issue affords a preparation suitable for rendering the bungs of carbonate of ammonia jars air-tight. A better thing can, however, be made from resin and lard in suitable proportions. This seems to be what is used by the firm named.

28/19. *W. W. P.* has not sent his name and address, nor has *Vaseline.* They must repeat their queries with these requirements.

28/31. *Apprentice.*—To make chloride of silver, dissolve the nitrate in water and add to it a solution of common salt or hydrochloric acid, collect the precipitate and dry in the dark.

28/25. *Vin. Pepsinæ.*—(1) For directions as to the filtration of such troublesome liquids see the remarks in "The Art of Pharmacy" (THE CHEMISTS' AND DRUGGISTS' DIARY, 1887). (2) Get a copy of the specification. (3) The provisions of the Pharmacy Acts are adopted in Guernsey, but not in the other Channel Islands nor in the Isle of Man. It would probably be illegal, under the 1852 Act, for an unregistered person to call his shop a pharmacy. (4) Formulæ for elixirs have been given recently, and cannot be repeated.

28/1. *Argent. Nit.*—The full amount of tartaric acid (½ drachms) may be used, instead of 9 drachms, in making **Marking Ink** according to the formula which we have published. The presence of the small amount of carbonate of silver does not alter the value of the ink. If the ink is properly used the marks are in the form of metallic silver, but if not heated sufficiently they are in the form of oxide. It is the latter which is affected by chlorinated lime, which changes the oxide to silver chloride, the lime being converted into calcium oxide, which rots the fabric. Bicarbonate of soda is given in the formula in sufficient quantity to decompose the silver salt and because most chemists have it, if not the pure carbonate.

31/14. *W. H. Gilkes.*—Plaster-skins are made from sheep-skin, but instead of being tanned they are tawed, alum and common salt being used for this purpose, and a dip in milk of lime being finally used to whiten the leather.

31/23 *M. D.*—Acetanilide is only sparingly soluble in water, but is readily soluble in alcohol. The formula which we gave for a mixture is as practical a one as can be given, as any alcoholic solution must be mixed with water before it is administered. It would be much better not to attempt the solution of the remedy at all, but to give it suspended in a mixture in the form of powders.

30/50. *B. J. E.* complains that the **Menthol Catarrh Snuff** for which a formula was given in our issue for February 11 causes great soreness of the nostrils, although it relieves the catarrh. To remedy this we would suggest that less menthol should be used. Probably the addition of bismuth subnitrate would be beneficial.

24/29. *Analysis.*—The nose is as good as anything for detecting the presence of sewer gas in a room. Aubry Husband's "Aids to Analysis of Food and Drugs" (Bailliere, 1*s.*) may suit your purpose, but practical experience is necessary in examining water.

30/55. *Laughing Gas.*—**Nitrous Oxide** is made by heating nitrate of ammonium in a retort until it fuses, when the gas is liberated, and is collected after passing through three wash-bottles containing potash solution, ferrous sulphate solution, and water. An iron retort may be used, but glass or porcelain is preferable. A gas-furnace should be used as the source of heat; and as soon as the gas begins to be evolved, the flame should be turned down so as just to keep up the action. The compression of the gas is a technical detail, which you must learn by actually seeing the operation.

27/74. *X. C. C.*—Salicylated soap-plaster is a good remedy for soft corns. Mix 1 drachm of the acid with 10 drachms of soap-plaster and spread on chamois. Glycerine is also good. We do not know the powder which you name. Is it a saline?

Information Wanted.

[*Replies to the following requests are solicited by correspondents of* THE CHEMIST AND DRUGGIST.]

25/22. Suppliers of gypsum in quantity.

27/46. What is the wholesale price of goose grease, and what it is generally sold at retail?

20/6. Red composition used to letter headstones; and what is it composed of?

6/66. The photographic process for printing black lines on white paper.

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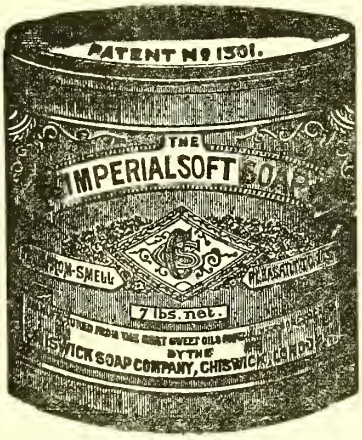
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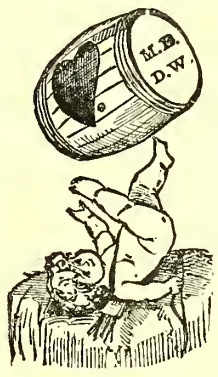
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202 Grand Street, New York City; London Depot, 51 Strand, W.C.

Hovenden & Son, Sanger & Son, Barclay & Sons, Edwards & Son, and all Wholesale Druggists.

GOOD OFFER TO ENERGETIC CHEMISTS.

Consult "The Chemist and Druggist," August 27, 1887, pages 5, 243, for full particulars.



Circulars for Eucalinum sent free to any Wholesale House in London for enclosure.

Sole Wholesale Agents in United Kingdom—
CHAS. GREEN & CO.,
Tower Chambers, Moorgate Street, LONDON, E.C.

SULPHATE OF QUININE
(GOLD AND SILVER BRAND)
QUININE FACTORY AUERBACH
(DR. SEYFERTH).

Certified by Professor Fresenius, of Wiesbaden as equal to the best preparations of other marks

DEUTSCHE GOLD AND SILBER SCHEIDE ANSTALT
(VORMALS ROSSLER).
FRANKFORT-ON-MAINE.

CYANIDE OF POTASSIUM,
IODIDE OF POTASSIUM,
BROMIDE OF POTASSIUM,
NITRATE OF SILVER,
CHLORIDE OF GOLD,
SULPHOCYANIDE OF BARIUM,
IRON Reduced by HYDROG[EN],
TARTARIC ACID,
HYDROCHINON,
STRONTIA,
MAGNESIA, and ALL OTHER CHEMICALS for PHOTOGRAPHIC and PHARMACEUTICAL PURPOSES, of the Best Quality.

Sole Agents—**OSCAR ANDREAE & CO.**
26 Great Tower Street, LONDON, E.C.

THE VEREINIGTE FABRIKEN CHEMISCH-PHARMACEUTISCHER PRODUCTE,
Feuerbach-Stuttgart & Frankfurt a/M, ZIMMER & CO.

Telegraphic Address—"JOBSTZIMMER FRANKFURTMAIN."

QUININE SULPHATE. Brand Jobst or Zimmer. Whitest and most bulky crystals; utmost purity warranted.
QUININE HYDROCHLORATE. Brand Jobst or Zimmer. Whitest and most bulky crystals; utmost purity warranted.
ZIMMER'S QUININE PEARLS, in original bottles or boxes of 25, 50, or 100. Each pearl contains 0·1 g. (=1½ grain) Chinin sulfur. puriss. c. bisulf. parat.
CINCHONIDINE, CINCHONINE, QUINIDINE, QUINOÏDINE, and all other preparations from China Bark.

Price Current of the other Pure Chemicals will be forwarded upon application.

SOLE WHOLESALE AGENTS:
A. & M. ZIMMERMANN, 6 & 7 CROSS LANE, ST. MARY-AT-HILL, E.C.

NELL'S
PURE CRUSHED LINSEED.
Linseed of the very finest quality only used, and sold at lowest wholesale prices.

For Samples and Quotations write to **R. J. NELL,**
SEED CRUSHING MILLS,
LOUTH, LINCOLNSHIRE.

CITRATE OF MAGNESIA.

IN THE SEASON OUR OUTPUT EXCEEDS

ONE TON PER DAY

and during the coming Summer we have every prospect of increasing this amount. We shall be happy to give prices on application.

SPECIAL QUOTATIONS TO LARGE BUYERS.

The following is one of the many Testimonials we receive:

90 Western Road, Brighton,
January 14, 1888.

MESSRS. LORIMER & Co.

GENTLEMEN,—We have pleasure in informing you that having tried the Citrate of Magnesia of all the makes that have been offered to us, taking Bishop's as a standard, we find yours to be the only one comparing favourably with the same, and that it quite equals, if not surpasses, it.

Yours truly,
HEADLAND & CO., CHEMISTS.

OUR NEW 1888
COD LIVER OIL

is now in stock, QUALITY SUPERB. EACH CASK carefully selected from the choicest Norwegian Brands. PRICES LOWER than any previous season.

QUOTATIONS, IN BULK OR BOTTLED, ON APPLICATION.

We most strongly recommend Chemists to buy their NEW Oil bottled ready for Sale. We supply it in all sizes, bearing customers' own labels when preferred, and guarantee it, when bottled by us, to remain sweet and fresh.

LORIMER & CO., BRITANNIA ROW, ISLINGTON, LONDON.

NOTICE.

There is absolutely no Acid or Alkali used in the manufacture of

PETROLINA.

PETROLINA

Is a pure product of Petroleum deodorised by the action of superheated Steam and Air, and decolorised by filtration through Bone Charcoal.

NEVERTHELESS,

PETROLINA is as Cheap as any of the inferior Jellies produced by the less expensive and highly deleterious Acid process

THEREFORE,

BUY THE BEST,

When it is also

THE CHEAPEST.

Packed in Oak Kegs of 112 lbs., 56 lbs., or 28 lbs., and in the Patent Self-opening Tins containing 14 lbs., 5 lbs., or 1 lb.

SAMPLE of PRICE LIST AND FORMULE FREE.

ORDER PETROLINA THROUGH ANY WHOLESALE DRUGGIST OR DRYSALTER.

E. A. DE PASS & CO., 3 Coleman Street, London, E.C., **SOLE AGENTS.**

GENUINE EAST INDIA MUSTARD SEED OIL

GUARANTEED ABSOLUTELY PURE AND UNADULTERATED.

The ordinary 1/- size, 50/- a gross; also an extra large size, to be retailed at 2/-, at 90/- a gross, leaving a good margin of profit to the retailer. As it is now universally being advertised, there is setting in an increased public demand.

IMPORTANT CONCESSION!!!—Note: On all first orders for an original case of each size, an extension of credit of six months will be afforded, thus enabling the retailer to secure all the benefit of selling every bottle before paying a single shilling out of his own pocket.

Artistic Window Tablets, Stationery, &c. with each order.

CERTIFICATE OF ANALYSIS.

"I hereby certify that this is a genuine unmixed Mustard Seed Oil.—(Signed) A. NORMAN TATE, F.I.C., F.C.S., Liverpool, August 8, 1."

GREAT REDUCTION! — NEW AMERICAN OIL OF PEPPERMINT, NOT deprived of its Menthol, 8*s.* 9*d.* per lb. In original 22-oz. bottles.

CHILIAN HONEY—½-cwt. tins, 3*d.* per lb.

Non-freezing, Finest Norwegian COD-LIVER OIL, guaranteed premier quality; 25-gallon tin-lined barrels for £5, or in 4½-gallon tins at 4*s.* 6*d.* per gallon.

DRUGGIST'S WHITE GLYCERINE, 12·60—9*d.* per lb., 60-lb. tins (expected to be dearer).

ESS. LEMON (NEW)—4*s.* 6*d.*, 10-lb. tins.

DALMATIAN INSECT POWDER in Original 28-lb. tins at 1*s.* 2*d.* per lb.

P. RHEI, E.I. ELECT.—7-lb. bottles, 3*s.* per lb.

SENNA T.V.—56-lb. bags, 3¼*d.*; and 2-cwt. bales, 3*d.* per lb.

CIRCASSIAN OIL—40-gallon barrel, bright and clear as **COLZA OIL**—1*s.* 6*d.* per gallon (for Hair Oil, &c.); sample 9-gallon tin, for 15*s.*

Special—PETRO. JELLY (firmer than VASELINE)—4*d.* per lb., 40-lb. tins.

"STRUCK DOWN DEAD" VERMIN KILLER, 1 gross case of threepenny size carriage paid for 10*s.* 6*d.*; "Wilson Register" free.

PURE CRYSTAL MENTHOL CONES, MOUNTED neat turned-wood boxes for the pocket. 1 *gross sent free, per Parcels Express,* **TO ANY PART OF THE WORLD** on receipt of P.O.O. for 21*s.*; *id est* 144 sixpenny size delivered free at 1¾*d.* each.

NOTE.—All PACKAGES FREE, and delivered to RAILS FREE.

GOOD MERCHANTABLE QUALITY GUARANTEED.

E. R. BANNER, Drug Merchant, 56 Boaler St., **LIVERPOOL.**

34

WITHOUT A RIVAL!

From the time Medicine was first discovered by the Ancients down to the present none ever made such progress as

BEECHAM'S PILLS.



They stand without a rival, and have by far the largest sale of any Patent Medicine in the World. This is a fact which every business man is bound to admit.

All Foreign Dealers will find BEECHAM'S PILLS the most Saleable Medicine in the Market.

The health-restoring and life-giving properties of these Pills are such as to increase their demand every year.

The words "BEECHAM'S PILLS, SAINT HELENS," are on the Government Stamp affixed to each box.

Prepared only and sold by the Proprietor, THOMAS BEECHAM, ST HELENS, LANCASHIRE, ENGLAND, in boxes at 1s. 1½d. and 2s. 9d. each, with full instructions for use.

THE

HOP BITTERS COMPANY

(LIMITED)

Have introduced a 2/6 size Bottle, which is in great demand.

Send to your Wholesale Dealer for price, and put in Stock.

RETAIL PRICES in FUTURE,

2s. 6d. & 4s. 6d.

HOMŒOPATHIC MEDICINES

Supplied direct or through the PATENT MEDICINE HOUSES

SMALL QUANTITIES ARE CONVENIENTLY SENT BY PARCEL POST.

For Illustrated Guide and Prices apply to

JAMES EPPS & CO., Homœopathic Chemists

(FIRST ESTABLISHED),

48 THREADNEEDLE STREET, LONDON

SINGLETON'S GOLDEN EYE OINTMENT

250 YEARS' WORLD-WIDE REPUTATION

BY FAR THE BEST KNOWN REMEDY FOR ALL DISORDERS OF THE EYES AND EYELIDS.

Recommended and frequently used by DR. WARE, DR. ALEXANDER, MR. CRITCHETT, and other Eminent Oculists.

CAUTION.—*None offered for Sale can be genuine unless the words* **SINGLETON'S GOLDEN EYE OINTMENT** *are engraved on the Government Stamp and round the Pot, and the Bill of Directions in which it is enclosed bears the name and address—*

STEPHEN GREEN, 210 Lambeth Road, LONDON, S.

TOWLE'S CHLORODYNE

In **COUGHS, ASTHMA, BRONCHITIS, INFLUENZA,** &c., its effects are truly wonderful, immediately relieving the tightness of the Chest, allaying irritation of the Throat, promoting Expectoration, and speedily and effectually subduing the Cough.

It soothes the weary aching of **CONSUMPTION,** relieves the harassing Cough, and often prevents those sleepless nights so trying to the sufferer.

In **CHOLERA, DIARRHŒA, DYSENTERY,** &c., it has proved itself a most valuable specific, quickly relieving the pain and spasms, and seldom failing to check the disease; for which property, as well as for its value in Sea Sickness (for which it is the best remedy known) it should be an indispensable article in every emigrant's outfit.

TESTIMONIALS.

"Superior to every other I have tried."
F. H. Green, M.R.C.S.,
Rochdale Dispensary.

"Peculiarly serviceable in Bronchial, Spasmodic, and Neuralgic Affections."—
Alfred Aspland, F.R.C.S.,
Consulting Surgeon to Ash'on Infirmary.

"I have used it largely in Spasmodic and Painful Affections, Bronchitis, and Neuralgia. It has the property of being readily combinable in ordinary prescriptions—an advantage over all similar preparations."—
R. Trafford Whitehead, M.R.C.S.

A Surgeon writes:—"In Diarrhœa, Colic, Ague, Spasms, I have found it relieve more pain and cause more joy than any other article that can be named. Has proved itself a specific against seasickness."
Island Bridge, Dublin.

"I am pleased to say that although I have not finished a quarter of the bottle (2*s.* 9*d.*) the pain has left my chest, and the cough is almost well."—J. Brown.

Immediately Relieves
COUGHS, CONSUMPTION, ASTHMA, BRONCHITIS, TIC, SPASMS, HYSTERIA, DIARRHŒA, DYSENTERY, CHOLERA, CRAMP, AGUE, Sea-Sickness, &c.

REVISED PRICE LIST.

	Retail.	per doz
	s. d.	*s. d.*
Towle's Chlorodyne	1 1½	8 6
Ditto	2 9	3 0
Ditto	4 6	16 0
Ditto (8 „)	11 0	13 0
Liq. Chlorodyni (*Original and only Genuine Preparation*) ¼ lb. ..		10 0
Ditto ditto ½ lb. ..		14 0
Ditto ditto 1 lb. ..		16 0
Winchester Quarts (6 lb) 7/6 per lb., bottles free.		
Towle's Antibilious Pills	1 1½	8 6
Ditto	2 9	3 0
Towle's Chlorodyne Lozenges	0 7½	5 3
Ditto Jujubes	1 1½	8 6
Ditto in bulk, bottles free, containing 1 lb., 2/9 each.		
Ditto ditto 1 lb. 10 oz., 4/6 „		
Ditto ditto 4 lb., 10/- „		
N.B.—The Commissioners will allow them to be sold by the retailers without further duty, provided they are simply wrapped in *paper*, and not enclosed in a *box, bottle*, or *packet*.		
Thornton's Celebrated Toilet Cream	1 0	9 0
Ditto	1 6	14 0
Ditto	2 6	4 0
Ditto	2 6	4 0
Amboline (Registered Trade Mark)	2 6	4 0
The Thornton (Red) Lotion (Stamped)	1 0	9 0
Thornton's Paragon Hair Wash	2 6	4 0
Ditto		

Posters, Bills, and Showcards on application

£5 worth (assorted or otherwise) Carriage Paid.

7 lb. Lozenges and upwards stamped with Chemists' own name, free of charge.

A. P. TOWLE & SON,

75 Back Piccadilly,
Manchester, *December*, 1886.

IMPORTANT.

ROYAL BALSAMIC PLAISTERS

PREPARED BY W. MATHER.

CAUTION TO THE TRADE.

The Commissioners of Inland Revenue having instituted Proceedings against several Chemists owing to certain Handbills accompanying the sale of Royal Balsamic Plaisters, such Handbills being regarded as asserting a Proprietary Right contrary to Act of Parliament, retailers are respectfully solicited to examine all packages of Plaisters they may have in stock, and

Destroy all Handbills Issued Prior to this Notice

that have reference to Royal Balsamic Plaisters. As all future Handbills will bear the date of issue at the bottom, it will be understood that all Handbills as have no date thereon must not be used. It is hoped that retailers will render assistance to prevent further proceedings by their compliance with the terms of this notice. It may be observed that the Stamp on the back of the Plaisters is in accordance with the provisions of the Act of Parliament.

W. MATHER,

DYER STREET, HULME, MANCHESTER, ENGLAND.

PRICE LISTS SENT ON APPLICATION.

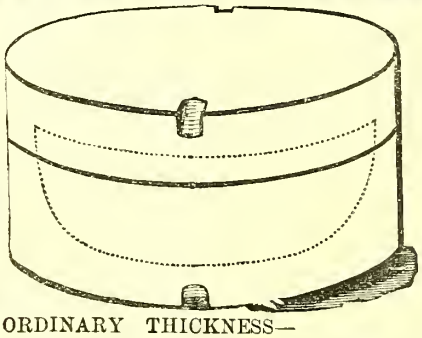
London Wholesale and Export Agents: Messrs. MACE & HALDANE, 77 Milton Street, London, E.C.

WILLIAM TOOGOOD'S
SPECIALITIES.

WAREHOUSE AND SHOW ROOM,
BURLINGTON BUILDINGS,
HEDDON STREET, REGENT STREET, LONDON, W.

TOOGOOD'S
IMPROVED PATENT
EARTHENWARE COVERED POTS

Are claimed to be the most perfect and convenient yet offered to the Trade.



Owing to the increasing demand for our Patent Pots, we have introduced a Special THIN Series for Dispensing.

These Pots are beautifully glazed and finished, and, being very light, are specially adapted for sending by post.

ORDINARY THICKNESS—

1 dr.	2 dr.	½	¾	1	1½	2	3	4	6	8	ounces.
1/6	1/6	1/6	1/7	1/8	1/10	2/2	2/10	3/4	4/6	5/6	per doz.

THIN for DISPENSING—

½	¾	1	1½	2	3	4	6	8	ounces.
1/7	1/8	1/10	2/-	2/4	3/-	3/8	5/-	6/-	per doz.

TOOGOOD'S
BURNT-IN POTS,
FOR COLD CREAM, TOOTH PASTE, &c.

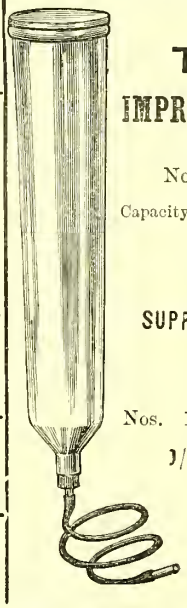
TOOGOOD'S
GRADUATED MEASURES.

TOOGOOD'S
BOXWOOD-TOP CORK BOTTLES

TOOGOOD'S
MEXICAN SQUARES.

TOOGOOD'S
CORN-SOLVENT BOTTLE.

TOOGOOD'S
POISON BOTTLES.



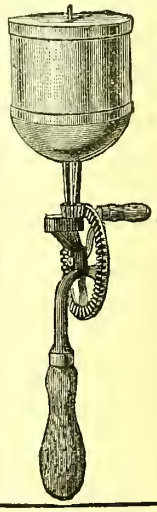
TOOGOOD'S
IMPROVED PERCOLATORS.

Nos.	1	2	3	4	5
Capacity	12	25	66	100	160 ozs.
	2/	3/	4/6	6/	7/ each

SUPPORTS FOR ABOVE IN STAINED WOOD.

Nos.	1	2	3	4	5
	1/9	2/	3/	3/	3/6 each.

NORMAN'S
PATENT PILL COATER



The cheapest and most efficient machine yet introduced, combining simplicity with portability, and enabling small quantities of pills to be coated with the same facility as large.

It speedily pays its own cost.

Price 3/6 each.

Australian Agency and Sample Room:
Mr. A. I. JOSEPH, 250 Pitt Street, Sydney.

Telegraphic Address: "TOOGOOD LONDON."
Telephone No. 3834.

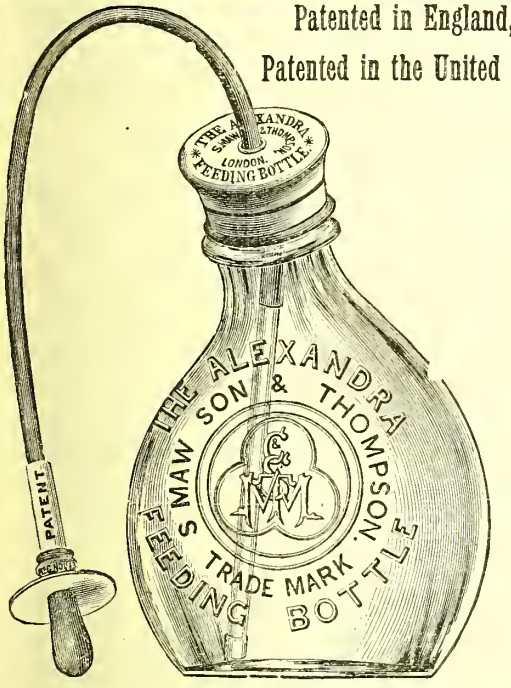
William Toogood's Price Current of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.

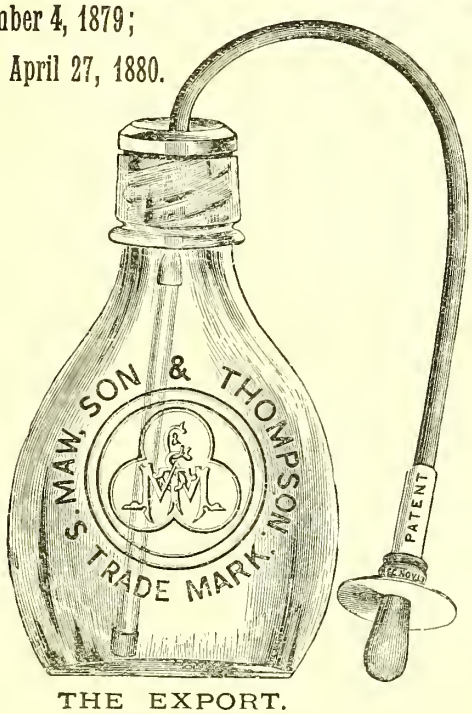
S. MAW, SON & THOMPSON'S

FEEDING BOTTLES.

Patented in England, December 4, 1879;
Patented in the United States, April 27, 1880.



THE ALEXANDRA.
(Earthenware Cap.)



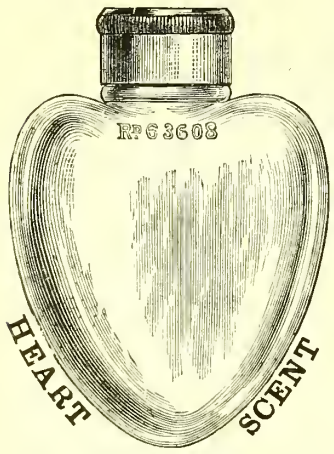
THE EXPORT.
(Glass Screw Stopper.)

		White Fittings.			Black Fittings.		
Alexandra, China or Wood Top Corks ...	per doz.	3/8	—	—	4/3	—	—
Alexandra, 2nd Quality, Wood Top Corks	,,	3/-	—	—	3/6	—	—
Alexandra, Earthenware Caps.....	,,	—	8/-	11/-	—	8/6	12/-
Alexandra, Earthenware Screw Stoppers	,,	—	—	11/-	—	—	12/-
Alexandra, Glass Screw Stoppers	,,	4/-	8/-	11/-	4/6	8/6	12/-
Export, China or Wood Top Corks	,,	3/6	—	—	4/-	—	—
Export, 2nd Quality, Wood Top Corks ...	,,	2/9	—	—	3/3	—	—
Export, Earthenware Caps	,,	—	7/3	—	—	8/-	—
Export, Glass Screw Stoppers	,,	4/-	7/6	—	4/6	8/-	—

FOR FURTHER PARTICULARS SEE QUARTERLY PRICE CURRENT, PAGES 46 AND 47

SPECIAL QUOTATIONS TO WHOLESALE BUYERS. [1]

S. MAW, SON & THOMPSON, LONDON.



R. H. BARRETT,

Flint Glass Bottle Works,

THE OVAL, CAMBRIDGE HEATH, LONDON E.

THE HEART SCENT BOTTLE (Reg.), for Salts or Perfume.

Is most admirably adapted for pocket use, combining great beauty of design with the maximum of convenience.
Prices as follows, Plain or Fluted:—WHITE, 21/- per gross; COLOURED, 24/- per gross.
Or in 5 GROSS lots:—WHITE, 16/-; COLOURED, 18/-. If put up in Dozen Boxes, 2s. per gross extra.
N.B.—The Caps for these will be fitted, if desired, with indestructible washers, to resist the action of ammonia, which destroys cork in a short time.

METAL SCREW-CAPPED LIMES, in White Flint, Actinic Green, or Amber.
The Best Bottle for Glycerine or Pills. Prices: 1 oz. 13/6, 2 oz. 15/-, 3 oz. 18/-, &c. per gross.

Chemists' and Perfumers' Bottles in great variety, Plain or Stoppered.

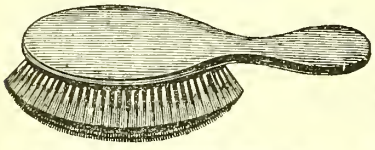
Orders may be sent to the PRINCIPAL WHOLESALE HOUSES.
TELEGRAPHIC ADDRESS—"FOREFRONT LONDON."

BURROUGH'S Best Cale St. Distillery, Methylated CHELSEA, S.W. Spirits AT LOWEST PRICES.

And Best Miscible Naphtha FINEST WOOD NAPHTHA.

JAMES BURROUGH, LONDON, S.W.

FOR BRUSHES OF ALL KINDS TRY AND OPEN AN

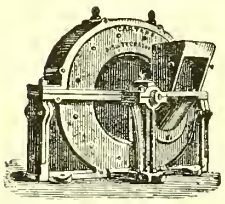


ACCOUNT WITH **DUKAS & CO.**

20 RED LION SQUARE, LONDON, W.C., WHO ARE THE BEST AND CHEAPEST MAKERS IN EXISTENCE.

CARTER'S DISINTEGRATORS

Will Pulverise, Granulate, or Shred almost any Mineral, Vegetable, or Animal Substance.



NEARLY 1,100 IN USE

IN ALL PARTS OF THE WORLD.

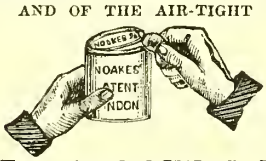
For Grinding Sugar, Bark, Linseed, Ginger, Pepper, Spices, Salt, &c., this Machine is invaluable.
Made in 9 Sizes. Illustrated Catalogue may be obtained on application.

Samples of ANY Material will be Ground free of charge

J. HARRISON CARTER, 82 MARK LANE, LONDON; and PARIS.
Telegraphic Address—Milling London.

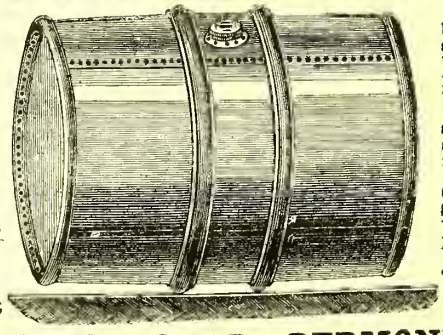
B. NOAKES & CO.,

MANUFACTURERS OF
METALLIC CASKS, DRUMS, & KEGS,
AND OF THE AIR-TIGHT



PATENT SELF-FIXING TINS.

IRON BARRELS,
CAPACITY 40 TO 120 GALLONS
AS PER ILLUSTRATION.



These large Iron Casks, similar to [illegible]ch, can be handled with equal facility to wood barrels, and, owing to their strength and durability, can be used over and over again for an indefinite period. They are perfectly liquid tight, being tested at a very high air pressure, and unlike wood, do not absorb any of the contents. They are all fitted with interchangeable bungs, and can also be fitted with screw plug in head, for draw-off tap.

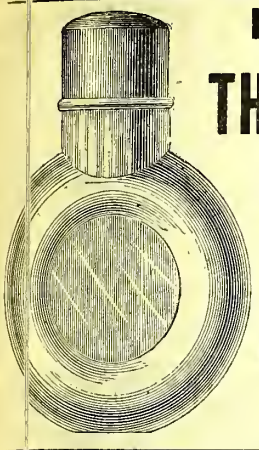
They are specially adapted for all kinds of Chemical Products, Sulphuric Acid, Glycerine, Spirits, Oils, Turpentine, Petroleum, Benzoline, Varnishes, Tar, Naphtha, Mineral Extracts, and Inflammable Liquids of every description.

We are making them in three qualities, "Black Iron," "Lead Coated," and "Tinned."

PRICE LIST ON APPLICATION.

Cable and Telegraphic Address—"NOAKES LONDON."

Offices and Works: 142 SPA ROAD, BERMONDSEY, LONDON, S.E.



EXTRAORDINARY CHEAP LINE!!!

THE WATCH SMELLING-SALT BOTTLE

PLAIN OR FLUTED.

These Bottles are fitted with **BEST SCREW NICKEL CAPS**, lined with Washers, and are **the most wonderful value ever offered.** A trial order will prove this fact.

PRICE, IN BEST WHITE FLINT OR ASSORTED COLOURS, **12/6** PER GROSS, in not less than 1 gr. lots

Orders may be sent through any of the Wholesale Houses, or direct to

E. A. HEARN & CO., Manufacturers of Glass Bottles of every description.

381-3 KINGSLAND ROAD, LONDON, E.

The annexed Illustration shows exact size of above-mentioned Bottle.

PATRONISED BY HER MAJESTY.

BARBER'S ORIGINAL CRIMSON MARKING INK,



WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1s., 2s., 2s. 6d., and 5s. Bottles.

Also Barber's Concentrated Liquid **COCHINEAL**, for Colouring Jellies, Custards, &c.

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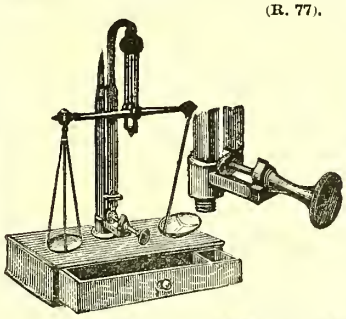
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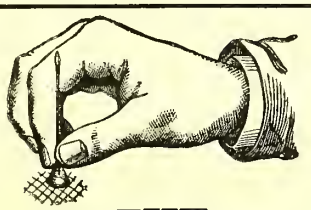
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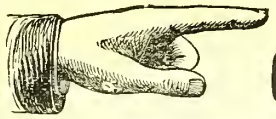
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Manufacturing Chemists and Mineral Water Makers,
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"Quite a new departure. The most ingenious and effective truss we have ever examined."—*Med. Press and Circular.*
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MAY BE APPLIED TO SORE & TENDER FEET, LIPS, & HANDS, ALLAYS IRRITATION, ABSORBS PERSPIRATION, KEEPS THE FEET SWEET & HEALTHY

In 4*d.* and 6*d.* tubes packed in 1 doz. Cartons suitable for Druggist's Counter.

PRICES AND SAMPLES ON APPLICATION FREE OF CHARGE.
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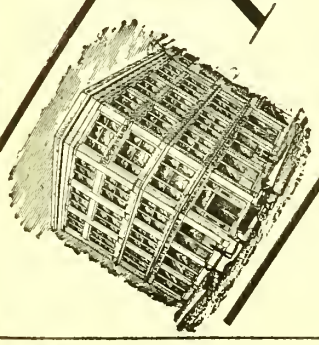
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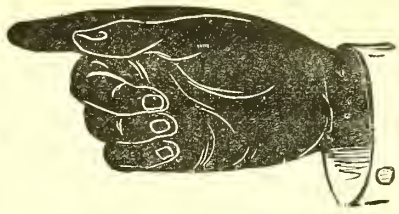
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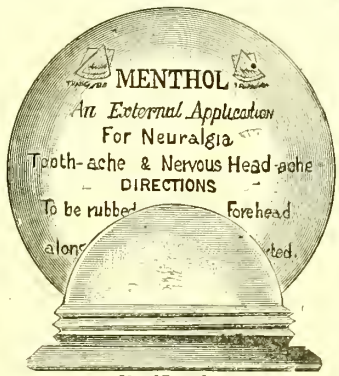
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3d.	Willow Wood, lid serving as holder..	3	0
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3d.	Glass Bottles, with Metal Screw Cap	5	0
1s.	Do. Do. Do. (Menthol on Wood Mount)	6	0
1s.	Do. Do. Do. (Bullet Cone wrapped in tinfoil)	6	0
9d.	Boxwood, Pedestal Shape	5	0
9d. or 1s.	Do. Barrel Shape	6	0
9d. or 1s.	Do. Acorn Shape.....	6	0
9d. or 1s.	Do. Skittle Shape	6	0
1s. or 1/6	Do. Do.	7	6
1/6 or 2s.	Do. Do.	9	6
9d. or 9d.,	good value, Do.	4	0
	(*A very cheap line.*)		
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14L 1s. or 1/6	Ditto extra-sized Cone, 12 in a box	7	6
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17s 6d.	Ditto Boxwood	4	0
18 1s.	Combination Pincushion and Menthol	7	0
19 6d.	Boxwood, Egg Shape, on elegant Card	3	0
20 1s.	Smelling Bottle Menthol	7	6
21 1s.	Menthol on Boxwood stopper, covered with glass shade, very attractive, each in a box	6	6
21A 1s.	Ditto Ditto 12 in a box.....	6	3
23 6d.	Ditto Ditto each in a box....	4	0
23A 6d.	Ditto Ditto 12 in a box.....	3	6
24 6d.	Boxwood, Bottle Shape, very attractive.....	3	6

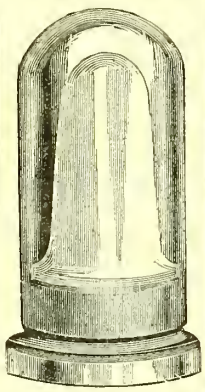


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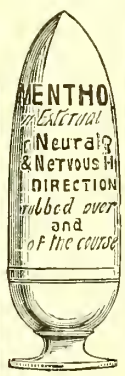
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THE "SANITAS" COMPANY, LIMITED,

Beg to inform the Trade that such alterations have been made in the Advertisements respecting this Preparation as meet the requirements of the

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As now sent out and Advertised, therefore,

"KINGZETT'S BACTERICIDE"

may be sold WITHOUT STAMPS.

It is requisite, however, for Chemists and Druggists to Register the Sales of this Preparation, because it contains a Scheduled Poison.

"KINGZETT'S BACTERICIDE"

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C. T. KINGZETT,
Managing Director

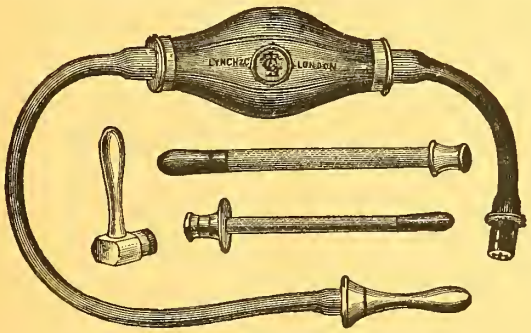
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NAME.	Per Dozen. Bots.	Per Dozen. ½ Bots.	Original Packages. Bottles.		Original Packages. ½ Bottles.	
Æsculap	15/	12/	25	28/	50	48/
Alet	10/	..	50	38/	..	..
Apollinaris	6/3	5/	50	25/	100	39/
Birmensdorf	12/	..	50	48/	..	..
Bonnes	12/	10/	50	48/	50	40/
Bourboule (La)	11/	..	50	42/	..	..
Bussang	7/	..	50	28/	..	..
Carlsbad	10/	..	50	40/	..	..
Condal	..	14/	..	..	50	56/
Contrexeville "Le Cler"	8/	..	50	32/	..	..
Do. "Pavilion"	9/	..	50	35/	..	..
Ems	7/	..	50	28/	..	..
Flitwick	12/	..	..	..	..	..
Friedrichshall	13/	10/	25	25/	50	40/
Giesshubler, double-size bottles	11/	..	25	21/	..	..
Do. claret-shape "	8/	5/	50	29/	100	36/
Homburg	10/	..	50	38/	..	..
Hunyadi-Janos	15/	13/	25	30/	50	50/
Johannis-Brunnen	6/	5/	50	23/	100	36/
Kissengen	11/	..	50	45/	..	..
Kreuznach	11/	..	50	45/	..	..
Kronenquelle	10/	..	50	40/	..	..
Marienbad	10/	..	50	38/	..	..

NAME.	Per Dozen. Bots.	Per Dozen. ½ Bots.	Original Packages. Bottles.		Original Packages. ½ Bottles.	
Missisquoi	18/	..	24	35/	..	..
Mont Dore	10/	..	50	40/	..	..
Oberbrunnen	10/	..	50	40/	..	..
Orezza	12/	..	30	28/	..	..
Pullna	12/	8/	40	36/	40	25/
Roisdorf	6/	..	50	25/	..	..
Rosbach	6/	5/	50	24/	10	36/
Royat	9/	..	50	34/	..	..
Rubinat	15/	..	25	30/	..	..
St. Boës	12/	..	50	48/	..	..
St. Galmier Badoit (Still)	6/	..	50	22/	..	..
Do. Noël (Sparkling)	6/	4/	60	26/	100	34/
St. Moritz	12/	..	50	48/	..	..
Salvator	..	9/	..	..	50	36/
Schwalbach	8/	6/	50	30/	50	24/
Selters	6/	4/	50	23/	50	16/
Sulis	6/	5/	50	23/	100	36/
Tarasp	12/	..	30	28/	..	..
Taunus	5/6	4/6	50	22/	100	32/
Vals (Société Springs)	8/6	..	50	32/	..	..
Vichy (State Springs)	8/6	7/6	50	32/	50	28/
Victoria Ofner	14/	10/	25	27/	50	38/
Wildungen	10/	..	50	40/	..	..

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The medical profession order Cadbury's Cocoa Essence in thousands of cases, as the most wholesome beverage. Be sure you get it when asked for, as imitations are often pushed for the sake of extra profit.

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Printed by Spottiswoode & Co., New-street Square; and Published at the Office, 42 Cannon Street in the City of London.—*April* 7, 18

copy of this Supplement is inserted in every number issued of "THE CHEMIST AND DRUGGIST."

THE CHEMIST & DRUGGIST
SUPPLEMENT.

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, APRIL 7, 1888.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 42 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that copy may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 10 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

All Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE and crossed MARTIN & Co.

OFFICES: 42 CANNON ST., LONDON, E.C.

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MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS.

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